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PRELIMINARY ASSESSMENT/ VISUAL SITE INSPECTION

ZEXEL ILLINOIS, INC.
ILD 984 862 383
AND THE
FORMER BORG-WARNER CORPORATION
ILD 005 077 250
DECATUR, ILLINOIS

FINAL REPORT

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460

Work Assignment No.	:	C05087
EPA Region	:	5
Site No.	:	ILD 984 862 383
Date Prepared	:	October 27, 1993
Contract No.	:	68-W9-0006
PRC No.	:	009-C05087IL4H
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1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC), received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5. Resource Applications, Inc. (RAI), TES 9 team member, provided the necessary assistance to complete the PA/VSI activities for the Zexel Illinois, Inc. (Zexel), and former Borg-Warner Corporation (Borg-Warner) facility.

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has usually exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading or unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where a strong possibility exists that such a release might occur in the future.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility
- Obtain information on the operational history of the facility
- Obtain information on releases from any units at the facility
- Identify data gaps and other informational needs to be filled during the VSI

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA
- Identify releases not discovered during the PA
- Provide a specific description of the environmental setting
- Provide information on release pathways and the potential for releases to each medium
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases

The VSI includes interviewing appropriate facility staff; inspecting the entire facility to identify all SWMUs and AOCs; photographing all visible SWMUs; identifying evidence of releases; making a preliminary selection of potential sampling parameters and locations, if needed; and obtaining additional information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the Zexel facility (EPA ID No. 984 862 383) and the former Borg-Warner facility (EPA ID No. ILD 005 077 250) in Decatur, Macon County, Illinois. The PA was completed on October 28, 1992. RAI gathered and reviewed information from the Illinois Environmental Protection Agency (IEPA) and from EPA Region 5 RCRA files. RAI also reviewed information that is relevant to the area of the facility from the U.S. Department of Commerce (USDC), U.S. Department of the Interior (USDI), U.S. Geological Survey (USGS), Federal Emergency Management Agency (FEMA), Illinois State Geological Survey (ISGS), and the Illinois State Water Survey (ISWS). The VSI was conducted on October 29 and November 4, 1992. It included interviews with facility representatives and a walk-through inspection of the facility. RAI identified 17 SWMUs and 4 AOCs at the facility.

RAI completed EPA Form 2070-12 using information gathered during the PA/VSI. This form is included as Attachment A. The VSI is summarized and 22 inspection photographs are included in Attachment B. Field notes from the VSI are included in Attachment C. Zexel sampling results are included in Attachment D.

2.0 FACILITY DESCRIPTION

This section describes the facility's location; past and present operations; waste generating processes and waste management practices; a history of documented releases; regulatory history; environmental setting; and receptors.

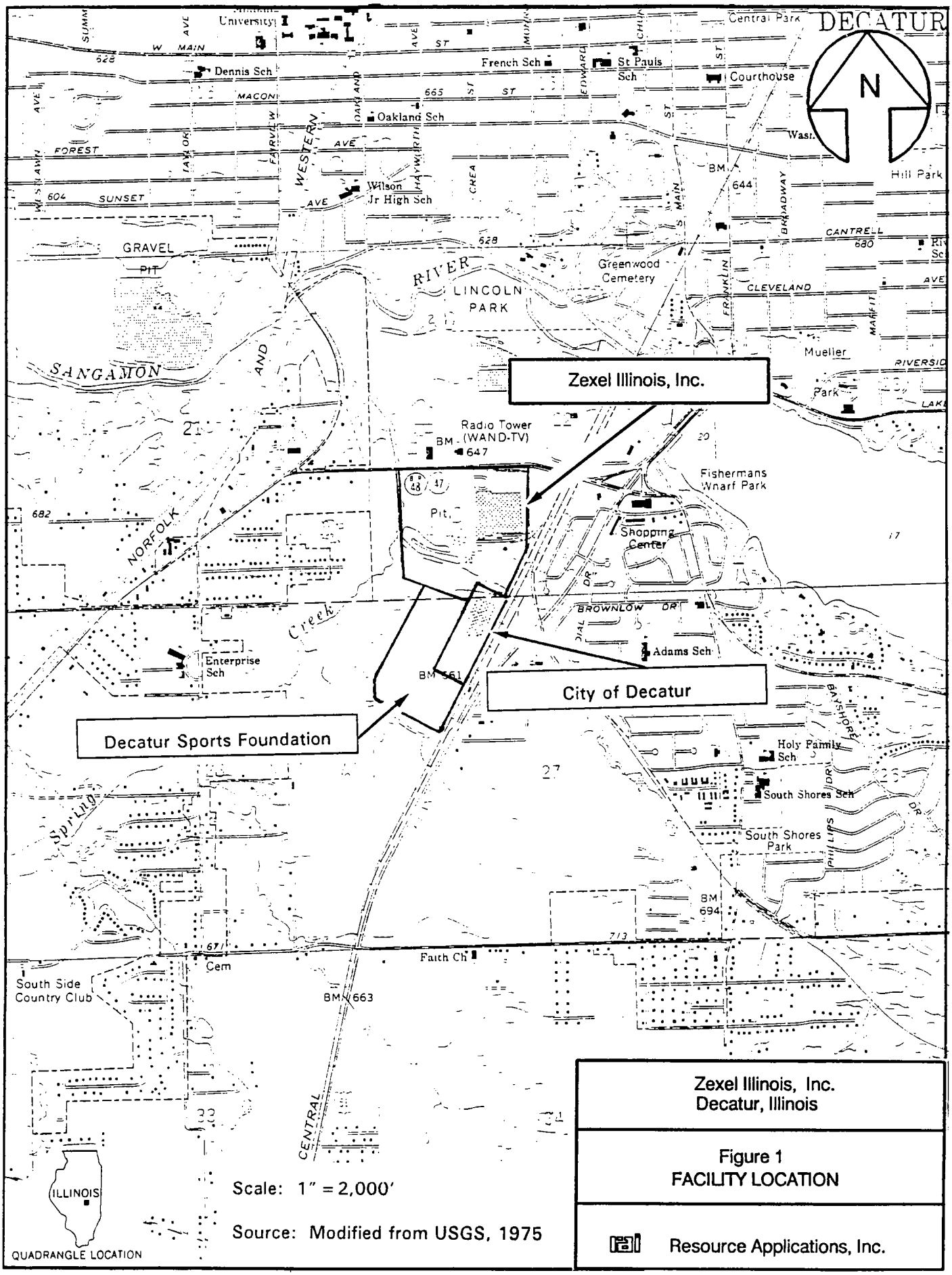
2.1 FACILITY LOCATION

The Zexel facility is located at 625 Southside Drive in Decatur, Macon County, Illinois (latitude 39°49'15" N and longitude 88°58'00" W). The Zexel facility occupies 103 acres in a commercial, industrial, and residential mixed-use area. The facility location and its relationship to surrounding topographic features is shown in Figure 1. The Zexel facility consists of a manufacturing building, an engineering research and development building, an environmental lab and wind tunnel, and an outdoor Former Emulsion-Breaking System (SWMU 5). The Zexel facility is bordered on the north by Southside Drive, a television station, and a sand and gravel operation, on the west by open space followed by commercial and residential property, on the south by and a country club, and on the east by the Illinois Central and Gulf Railroad.

The former Borg-Warner facility, located at 2195 South Elwin Road, included the City of Decatur (Decatur) and part of the Decatur Sports Foundation (Foundation) property. The Decatur facility occupies 27 acres and the size of the Foundation property is not known. An (unnamed) tributary to Spring Creek flows through the middle of the property and connects with Spring Creek along the western edge of the property.

2.2 FACILITY OPERATIONS

The Zexel facility manufactures automotive air conditioning systems, compressors, and components. Air conditioning kits are assembled from parts manufactured both on and off site. The facility generates and manages the following primary waste streams, and the waste codes listed are those assigned by the facility: chromium wastewater (D007), chromium filter cake (F019), nickel wastewater (F019), nickel filter cake (F019), waste Freon (F001), Freon still bottoms (F001), Freon-

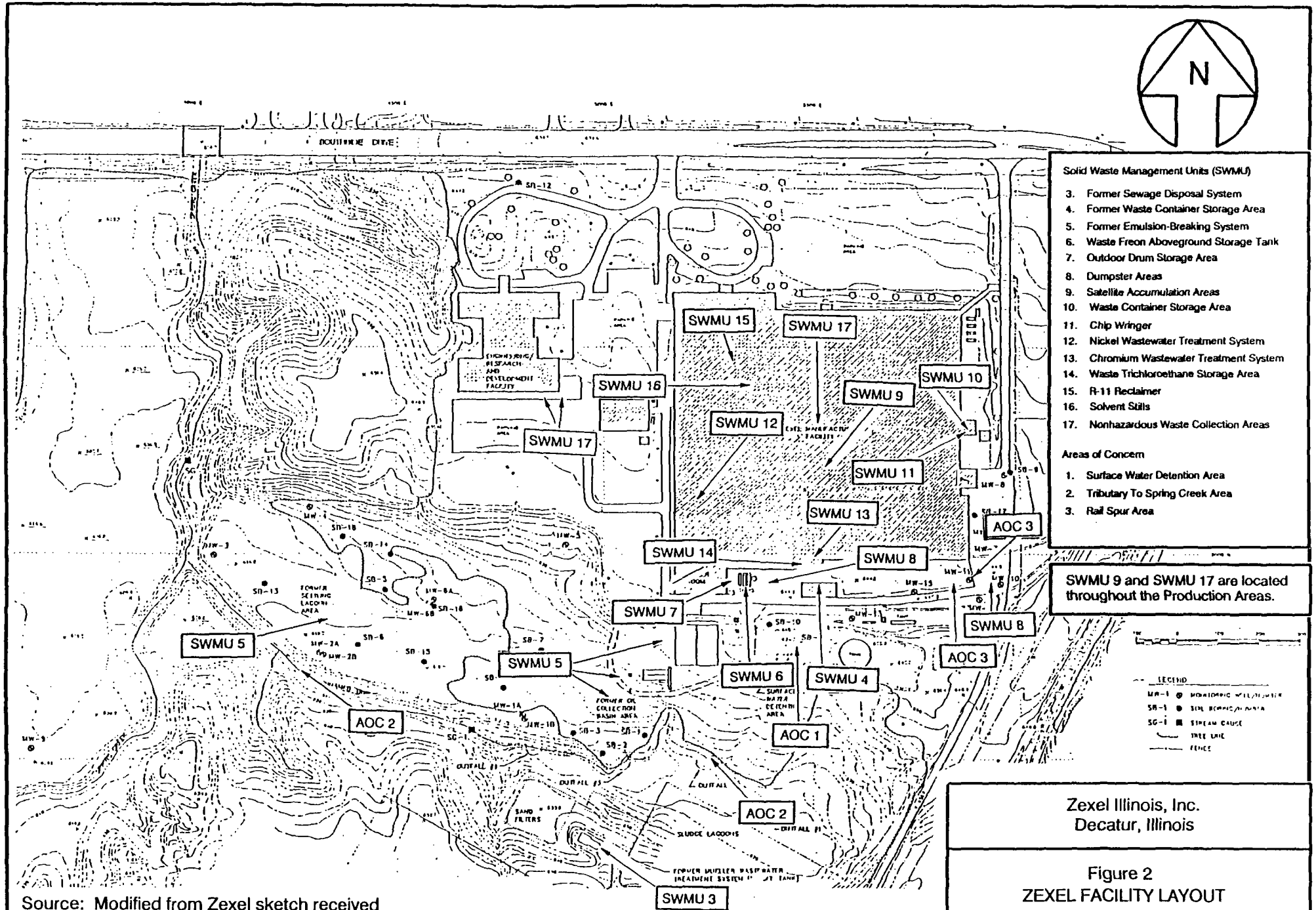

Zexel Illinois, Inc.
City of Decatur
Decatur Sports Foundation
DECATUR
N
Central Park
University
Dennis Sch
French Sch
St Pauls Sch
Courthouse
Oakland Sch
Wilson Jr High Sch
Hill Park
Greenwood Cemetery
LINCOLN PARK
RIVER
SANGAMON
Mueller Park
Radio Tower BM (WAND-TV) 647
Fishermans Wharf Park
Shopping Center
Pit
Enterprise Sch
Adams Sch
Holy Family Sch
South Shores Sch
South Shores Park
Faith Ch
Cem
South Side Country Club
BM 663
BM 694
BM 644
BM 561
Creek
Spring
CENTRAL
ILLINOIS
QUADRANGLE LOCATION
Scale: 1" = 2,000'
Source: Modified from USGS, 1975
Zexel Illinois, Inc.
Decatur, Illinois
Figure 1
FACILITY LOCATION
Resource Applications, Inc.

contaminated rinsate (F001), waste paint-related materials (F003), waste trichloroethylene (TCE) and n-hexane (F002), waste potassium hydroxide (D002), waste TCE (F001), waste trichloroethane (TCA) (F001), TCA still bottoms (F001), waste R-11 (F001), R-11 still bottoms (F001), and nonhazardous used oil, waste metal slag, waste test filters, and scrap metal. Past operations of Zexel or Borg-Warner have included the manufacture and assembly of automobile transmission and carburetor parts, and vitreous porcelain manufacture. Past nonhazardous wastes included oily waste. Waste polychlorinated biphenyl (PCB)-related material (other regulated material-ORM), cleanup waste (waste code unknown), and tanning and plating waste (waste code unknown) were also generated at the facility.

Solid wastes generated from facility operations and the SWMUs where they are managed are discussed in Section 2.3. The locations of SWMUs are shown in Figures 2 and 3. The facility is currently regulated as a large-quantity generator of hazardous waste and a hazardous waste treatment, storage, and disposal (TSD) facility.

Zexel currently employs about 350 people at the facility. Operations occur in one manufacturing building and one engineering research and development building. Another small building is used as an environmental lab and wind tunnel. The manufacturing building contains approximately 430,000 square feet of production space. The entire Zexel property, including the manufacturing facility, was owned by Borg-Warner Automotive, Inc. The former Borg-Warner property also included the Decatur and Foundation properties. Zexel U.S.A. Corporation owns approximately 103 acres at this site, which it acquired from Borg-Warner. On September 15, 1987, it acquired 45 acres and the manufacturing building, and on June 1, 1988, it acquired 58 acres, the engineering building, and the Former Sewage Disposal System (SWMU 3). Zexel U.S.A. Corporation leases the property to its subsidiary Zexel Illinois, Inc., which conducts operations at the facility. Zexel U.S.A. Corporation was formerly known as Diesel Kiki U.S.A. Co., LTD. Diesel Kiki U.S.A. Co., LTD, operated at the site as D.K. Manufacturing, Inc. (DKMI), until 1990.

According to facility representatives, Borg-Warner operations at the site were started during the early 1950s to manufacture Ford automobile transmission and carburetor parts. In 1958, the facility began manufacturing 2-cycle air conditioning compressors. Eventually, only air conditioners

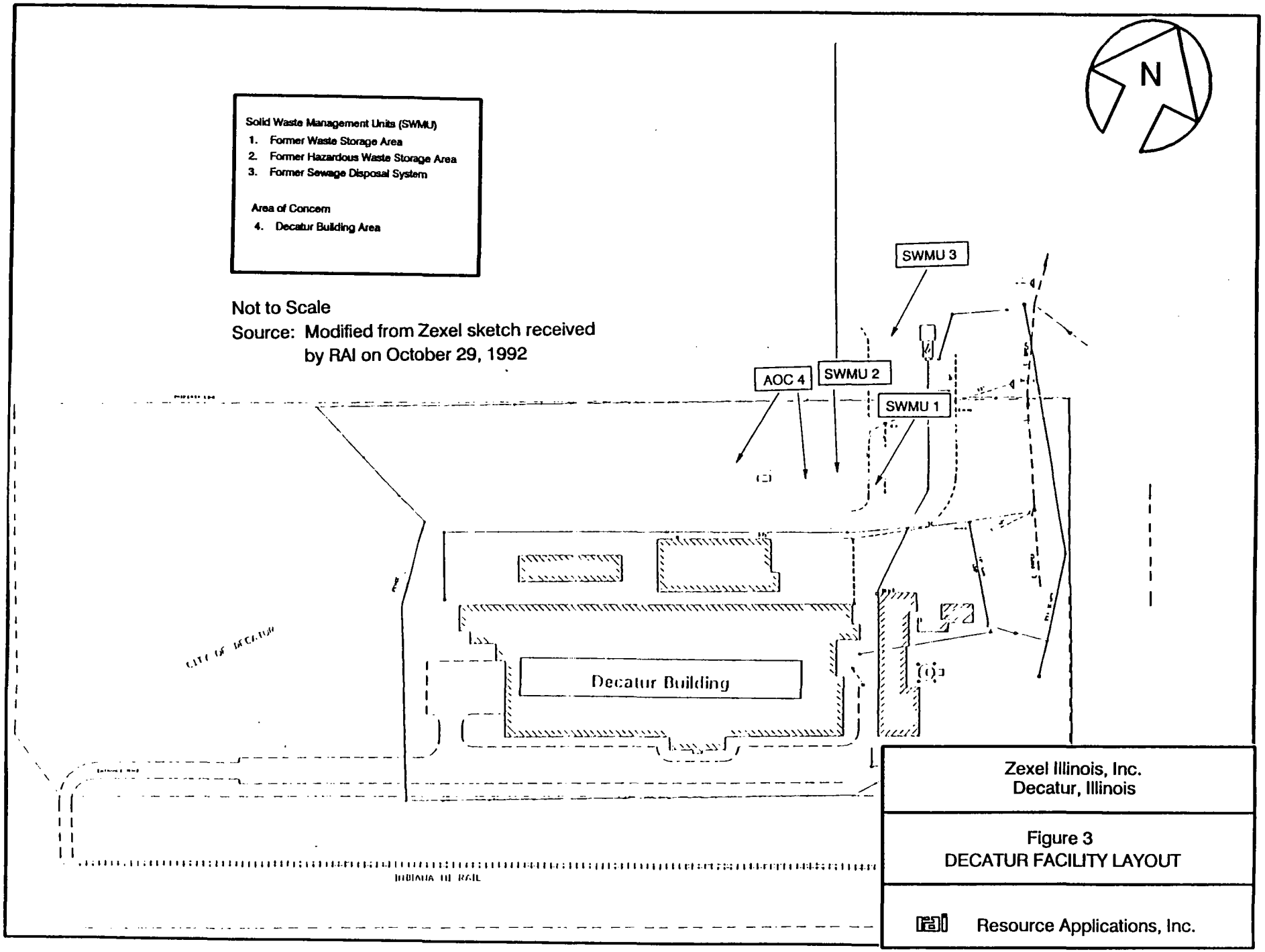


Source: Modified from Zexel sketch received by RAI on October 29, 1992

Zexel Illinois, Inc.
Decatur, Illinois

Figure 2
ZEXEL FACILITY LAYOUT

Resource Applications, Inc.



Zexel Illinois, Inc.
Decatur, Illinois

Figure 3
DECATUR FACILITY LAYOUT

Resource Applications, Inc.

and air conditioner parts were manufactured at the facility. According to documents reviewed as part of the PA, Borg-Warner operated as a small-quantity generator managing waste for less than 90 days. According to Borg-Warner, it filed a RCRA Part A permit application protectively.

The Borg-Warner facility occupied property which was subsequently divided into three parcels with separate owners. For this report, these parcels will be referred to by the name of their current owners. The three parcels are the Foundation property (size unknown), the Decatur property of 27 acres, and the Zexel property of 103 acres.

According to facility representatives, the Mueller Company acquired the Decatur and Foundation properties in approximately the mid-1920s. A production building was constructed on the Decatur property in the mid-1930s. Porcelain fixtures were manufactured through the early 1930s. The facility operated as the Mueller Company Plant No. 3. Mueller Company changed the operation of the facility to munitions production in the late 1930s to the late 1940s. According to Zexel facility representatives, the facility operated as a vitreous porcelain plant, produced munitions for the U.S. Army, and reconditioned control rods and reactor parts for the U.S. Navy.

According to architect drawings dated in 1942, there were nine buildings on site, as well as a tiled drainage field extending north and west of the buildings (Zexel, 1992b). The field consisted of 4-inch to 18-inch diameter drain tile discharging to the unnamed tributary to Spring Creek. There are also architect drawings from 1942 and 1943 for the Former Sewage Disposal System (SWMU 3) containing an Imhoff Tank, a dosing tank, sand filters, sludge drying bed, and associated outfalls and sewers. There apparently was also a separate system for storm sewers, which also discharged to the tributary to Spring Creek.

According to these architect drawings, the Former Sewage Disposal System (SWMU 3) was connected to the main production building and a cafeteria. Drawings for Borg-Warner, dated in 1950, indicate that effluent from a tannerizing room and a plating room were connected by sewer pipe to an earthen disposal basin (part of SWMU 3) located northwest of the production building.

According to Borg-Warner representatives, in approximately 1949 and 1950, Borg-Warner bought the facility from the Mueller Company. An aerial photograph from 1950 shows the Imhoff

Tank, sand filters and sludge drying beds, which are part of SWMU 3 (Zexel, 1992b). In addition, it apparently shows the earthen disposal basin, which is also part of SWMU 3, located immediately southeast of the Imhoff Tank. This photograph also apparently shows a reservoir and retaining structure, oriented east-west, immediately north of the tributary to Spring Creek, extending for approximately 1,500 feet west from the access road to Southside Drive. The photograph also indicates the presence of two other possible retention areas, one southwest and the other west of the production building on the Decatur property. Two ramps are also visible east of Spring Creek near the western edge of the Foundation property. Facility representatives and files reviewed as part of the PA failed to identify the exact uses of these structures and whether they were part of a surface water drainage system.

Architect drawings from 1955 show the plan for heat-treat furnaces and a quench oil system (Zexel, 1992b). These drawings indicate the presence of three underground storage tanks (UST), but because the plans are in schematic form, the exact location of these tanks within the City of Decatur building cannot be determined.

An undated floor plan for the Decatur property showing control areas indicates the possible presence of a plating room and a chromate wash room towards the west side of the building, and gasoline and kerosene USTs towards the south end of the building. The map also indicates an ammonia aboveground storage tank (AST) and gasoline USTs north of the building. No other information about these tanks is available, and consequently, this area is considered the Decatur Building Area (AOC 4).

An aerial photograph from 1960 shows the Former Sewage Disposal System (SWMU 3) (Zexel, 1992b). The earthen disposal basin area is 75 percent smaller than on the prior 1950 photograph. The retention areas west and southwest of the City of Decatur building are not evident. North of the tributary to Spring Creek, the reservoir and retention structure do not appear to be retaining water. The manufacturing building (now Zexel's manufacturing building) is present. Also indicated are the U-shaped settling lagoon, PCB-contaminated oil storage ponds, an oil-sludge separator, and the aerator tanks, which are all part of the Former Emulsion-Breaking System (SWMU 5). The building which houses the Former Waste Container Storage Area (SWMU 4) is present, as is the Surface Water Detention Area (AOC 1). An AST is visible where the TCE AST is located.

A facility drawing shows the Former Sewage Disposal System (SWMU 3) as abandoned by 1972 (Zexel, 1992b). This drawing also shows the sewer line that discharges to the earthen disposal basin (part of SWMU 5) but does not show the earthen disposal basin itself. The sewer line from the plating rooms is connected directly to the Imhoff Tank (part of SWMU 3).

A 1973 aerial photograph apparently shows a rectangular structure, oriented north-south, in the approximate location of the Former Waste Storage Area (SWMU 1) (Zexel, 1992b). ASTs and a possible retention lagoon are shown at the northwest corner of the Decatur building. Five ASTs and a 1.2 million gallon AST (for fuel oil) are also apparently shown south of the Zexel manufacturing building.

A 1981 aerial photograph shows the baseball diamonds located on the Foundation property (Zexel, 1992b). The engineering research and development building has also been added west of the Zexel manufacturing building. Two areas, which may indicate erosion, are visible extending south from the aerator tanks (part of SWMU 5) and AOC 1 towards the tributary to Spring Creek. Seven ASTs appear south of the Zexel manufacturing building.

2.3 WASTE GENERATION AND MANAGEMENT

Wastes are generated and managed at various locations throughout the facility. SWMUs and their current status are identified in Table 1. Present and past wastes generated at the facility are summarized in Table 2. The location of SWMUs and AOCs in relation to the facility layout is shown in Figures 2 and 3. SWMUs are discussed in detail in Section 3.0. Facility generation and management of both hazardous and nonhazardous wastes are discussed below. The waste codes listed are those assigned by the facility.

The facility generates and manages the following primary waste streams, and the waste codes listed are those assigned by the facility: chromium wastewater (D007), chromium filter cake (F019), nickel wastewater (F019), nickel filter cake (F019), waste Freon (F001), Freon still bottoms (F001), Freon-contaminated rinsate (F001), waste paint-related materials (F003), waste TCE and n-hexane (F002), waste potassium hydroxide (D002), waste TCE (F001), waste trichloroethane (TCA) (F001), TCA still bottoms (F001), waste R-11 (F001), R-11 still bottoms (F001), and nonhazardous used oil,

TABLE 1

SOLID WASTE MANAGEMENT UNITS

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit[a]	Status
1	Former Waste Storage Area	Yes	Inactive, not RCRA closed[b]
2	Former Hazardous Waste Storage Area	Yes	Inactive, not RCRA closed[b]
3	Former Sewage Disposal System	No	Inactive
4	Former Waste Container Storage Area	No	Inactive
5	Former Emulsion-Breaking System	No	Inactive
6	Waste Freon AST	Yes	Inactive, undergoing RCRA closure
7	Outdoor Drum Storage Area	No	Active, less than 90-day storage of hazardous waste
8	Dumpster Areas	No	Active
9	Satellite Accumulation Areas	No	Active
10	Waste Container Storage Area	No	Active, less than 90-day storage of hazardous waste

Notes:

[a] A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application.

[b] Borg-Warner stated that this unit did not store wastes for greater than 90 days, but there is no correspondence acknowledging this by EPA or IEPA.

TABLE 1 (Continued)

SOLID WASTE MANAGEMENT UNITS

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit[a]	Status
11	Chip Wringer	No	Active
12	Nickel Wastewater Treatment System	No	Active
13	Chromium Wastewater Treatment System	No	Active
14	Waste TCA Storage Area	No	Active, less than 90-day storage of hazardous waste
15	R-11 Reclaimer	No	Active
16	Solvent Stills	No	Active
17	Nonhazardous Waste Collection Areas	No	Active

Note:

[a] A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application.

[b] Borg-Warner stated that this unit did not store wastes for greater than 90 days, but there is no correspondence acknowledging this by EPA or IEPA.

TABLE 2

SOLID WASTES

Waste/EPA Waste Code[a, b]	Source	Solid Waste Management Unit
Chromium wastewater/D007	Chromium plating	13
Chromium filter cake/F019	Chromium plating	8, and 13
Nickel wastewater/F019	Nickel plating	12
Nickel filter cake/F019	Nickel plating	10, and 12
Waste freon/F001	Degreasing	6, and 16
Freon still bottoms/F001	Freon stills	4, 9, 10, and 16
Freon-contaminated rinsate/F001	Tank cleaning	7
Waste paint-related materials/F003	Painting operations	8, 9, and 10
Waste TCE and n-hexane/F002	O-ring backing	9 and 10
Waste potassium hydroxide/D002	Off-spec product	10
Waste TCE/F001	Degreasing	1 and 2
Waste TCA/F001	Degreasing	10, 14, and 16
TCA still bottoms/F001	Stills	9, 10, 14, and 16
Waste R-11/F001	Testing	9, and 15
R-11 still bottoms/F001	R-11 Reclaimer	9, 10, and 15
Used oil/NA	Compressors	10, 12, and 17
Waste metal slag/NA	Brazing furnace	8, 10, and 17
Waste test filters/NA	Q.A. Lab	8, and 17
Scrap metal/NA	Machining	8, 10, 11, and 17
Oily waste/NA	Machinery	5
Waste PCB-related material/ORM	PCB oil and cleanups	3, 5, and 7
Cleanup waste/Unknown	Remediation	7 and 17
Tanning and plating waste/Unknown	Tanning and plating	3

Notes:

[a] Not applicable (NA) designates nonhazardous waste.

[b] "Unknown" indicates that the waste was generated at the facility but that the waste code for that waste cannot be determined.

waste metal slag, waste test filters, and scrap metal. Past operations have included the manufacture and assembly of automobile transmission and carburetor parts, and vitreous porcelain manufacture. Past nonhazardous wastes included oily waste. Waste PCB-related material [other regulated material (ORM)] and cleanup waste (waste code unknown) were also generated at the facility, and tanning and plating waste (waste code unknown) was previously generated by Borg-Warner. All current wastes have been generated since 1988, when Zexel began operations at the facility, except the still bottoms, which have been generated since 1990.

Chromium wastewater (D007) is generated from chrome plating operations. The chromium wastewater (D007) is treated in the Chromium Wastewater Treatment System (SWMU 13). The facility generates approximately 267,000 gallons of this waste each month. The treated effluent is discharged to the Sanitary District of Decatur (SDD).

Chromium filter cake (F019) is generated by the Chromium Wastewater Treatment System (SWMU 13). The chromium filter cake (F019) collects in a 1-cubic-yard metal hopper, which is part of SWMU 13, and is transferred to a dumpster in one of the Dumpster Areas (SWMU 8). This waste is transported by Heritage Environmental Services, Inc. (Heritage) to its facility in Indianapolis, Indiana for chromium reduction. The facility generates approximately 6 cubic yards of this waste each month.

Nickel wastewater (F019) is generated from electroless nickel plating operation. The nickel wastewater (F019) is treated in the Nickel Wastewater Treatment System (SWMU 12). The facility generates approximately 32,500 gallons of this waste each month. The treated effluent is discharged to the SDD.

Nickel filter cake (F019) is generated by SWMU 12. The nickel filter cake (F019) collects in a 55-gallon steel drum, which is part of SWMU 12, and is transferred to the Waste Container Storage Area (SWMU 10). The waste is transported by Heritage to its Indianapolis, Indiana facility for stabilization. The facility generates approximately 150 gallons of this waste each month. This waste has been generated since 1988.

Freon 113 is used in degreasing. Waste Freon (F001) contaminated with oil is recovered through on-site distillation in closed-loop Solvent Stills (SWMU 16) attached directly to the degreasers. The facility treats approximately 625 gallons per month of this waste and none is shipped off site. In the past, waste Freon (F001) was generated as spent degreasing solvent. The waste Freon (F001) was accumulated in a 14,000-gallon Waste Freon AST (SWMU 6). In 1990, Zexel stored this waste for greater than 90 days during the installation of the Solvent Stills (SWMU 16). The solvent was reclaimed by the Solvent Stills and no waste was shipped off site.

Freon still bottoms (F001) are generated from the distillation of Waste Freon (F001) contaminated with oil in Solvent Stills (SWMU 16). The still bottoms are drummed in Satellite Accumulation Areas (SWMU 9) next to the stills and taken to the Waste Container Storage Area (SWMU 10). The 55-gallon steel drums are transported by Coleman Chemical and Oil (Coleman) of Peoria, Illinois, to Clayton Chemical (Clayton) of Sauget, Illinois for fuel blending. The facility generates approximately 320 gallons of this waste per month. In the past, this waste was also managed in the Former Waste Container Storage Area (SWMU 4).

Freon-contaminated rinsate (F001) was generated from tank cleaning operations. This was a one-time generation. The waste was collected in 55-gallon steel drums and stored in the Outdoor Drum Storage Area (SWMU 7). The drums were transported by Coleman of Peoria, Illinois to Trade Waste Incineration of Sauget, Illinois, for incineration. The facility generated 385 gallons of this waste in 1991.

Waste paint-related materials (F003) are generated from painting operations at the facility. The wastes are collected in 55-gallon steel drums in Satellite Accumulation Areas (SWMU 9) and transferred to the Waste Container Storage Area (SWMU 10). The drums are transported by Coleman of Peoria, Illinois, to Clayton of Sauget, Illinois, for fuel blending. The facility generated 275 gallons of this waste in 1991. In the past, this waste was managed in a dumpster in one of the Dumpster Areas (SWMU 8).

Waste TCE and n-hexane (F002) is generated as a residual from the mixture used as a backing in grooves for O-rings. The waste is collected in 55-gallon steel drums, in Satellite Accumulation Areas (SWMU 9), which are managed at the Waste Container Storage Area (SWMU

10). The waste is transported by Heritage to its facility in Indianapolis, Indiana, for solvent recovery or fuel blending. The facility generated 110 gallons of this waste in 1991.

Waste potassium hydroxide (D002) was generated from discarding off-specification product. The material was managed in the original drums in the Waste Container Storage Area (SWMU 10). The drums were transported by Heritage to its facility in Indianapolis, Indiana, for neutralization treatment. The facility generated 220 gallons of this waste in 1991.

In the past, TCE was used by Borg-Warner in vapor degreasers to clean parts and waste TCE (F001) was stored prior to shipment off-site for solvent recycling. The waste TCE was managed in 55-gallon steel drums at the Former Waste Storage Area (SWMU 1) and the Former Hazardous Waste Storage Area (SWMU 2). The facility generated less than 1,000 kilograms of this waste monthly. The waste TCE was transported by Ashland Chemical Company of Argenta, Illinois, to Waste Research and Reclamation in Eau Claire, Wisconsin for reclaiming or fuel blending.

Waste TCA (F001) is generated from vapor degreasers. The solvent is recovered in one of the closed-loop Solvent Stills (SWMU 16). A second degreaser has no still and the waste TCA is managed in a 550-gallon steel holding reservoir in the Waste TCA Storage Area (SWMU 14). The waste TCA is removed from the holding tank to 55-gallon drums which are stored adjacent to the holding reservoir. The waste may be accumulated in SWMU 14 or transferred to SWMU 10 prior to shipment off site. No information was available about the ultimate disposition of this waste.

TCA still bottoms (F001) are generated from one of the Solvent Stills (SWMU 16). The TCA still bottoms are placed in a 55-gallon steel drum in one of the Satellite Accumulation Areas (SWMU 9). The drums are then transferred to the Waste TCA Storage Area (SWMU 14). The waste may be accumulated in SWMU 14 or transferred to SWMU 10 prior to shipment off site. No information was available about the ultimate disposition of this waste.

Waste R-11 (F001) is a waste solvent generated by degreasing operations in the Quality Assurance Laboratory (Q.A. Lab). The waste R-11 is accumulated in a 55-gallon steel drum in one of the Satellite Accumulation Areas (SWMU 9) in the lab. When full, the waste is processed through

the R-11 Reclaimer (SWMU 15) and the solvent is returned to the degreasers. No information was available about the rate of generation of this waste.

R-11 still bottoms are generated by the R-11 Reclaimer (SWMU 15). The R-11 still bottoms are accumulated in a 55-gallon steel drum in one of the Satellite Accumulation Areas (SWMU 9). The drums are transferred to the Waste Container Storage Area (SWMU 10) when full. No information was available about the rate of generation or the ultimate disposition of this waste.

Nonhazardous used oil is generated from compressors and equipment maintenance at the facility. The used oil is placed in 55-gallon steel drums or a 300-gallon tank in one of the Nonhazardous Waste Collection Areas (SWMU 17) and transferred to the Waste Container Storage Area (SWMU 10). The drums are transported by Coleman of Peoria, Illinois, to Clayton of Sauget, Illinois, for fuel blending. The facility generates five to six 55-gallon drums of this waste per month. Oils generated by the Chip Wringer (SWMU 11) are transferred to the ultrafilter, which is part of the Nickel Wastewater Treatment System (SWMU 12).

Nonhazardous waste metal slag was generated by brazing furnace maintenance. About 55 gallons of this waste was generated each month from the interior scraping of the furnace. The metal slag was placed in 55-gallon steel drums in one of the Nonhazardous Waste Collection Areas (SWMU 17) and transferred to the Waste Container Storage Area (SWMU 10). This waste was landfilled off site as a nonhazardous special waste. In the past, this waste was also managed in a dumpster in one of the Dumpster Areas (SWMU 8).

Nonhazardous waste test filters were generated by the testing of evaporators in the Q.A. Lab. The filters were analyzed and saved. Eventually, however, waste test filters from the Q.A. Lab were placed in drums in one of the Nonhazardous Waste Collection Areas (SWMU 17), or in a dumpster in one of the Dumpster Areas (SWMU 8), and landfilled at Waste Hauling Landfill in Decatur, Illinois.

Nonhazardous scrap metal is generated as chips from parts cutting. The chips are collected in hoppers in one of the Nonhazardous Waste Collection Areas (SWMU 17). If the chips are coated with lubricant, they are placed in the Chip Wringer (SWMU 11). The chips are then placed in a box in the Waste Container Storage Area (SWMU 10). The scrap metal is then sold to a recycler.

Larger pieces of scrap metal, such as off-specification parts, or machining filter paper are placed in a dumpster in one of the Dumpster Areas (SWMU 8). No information was available about the ultimate disposition of this recycled waste.

In the past, oily waste from machinery and machining operations was treated on site in the Former Emulsion-Breaking System (SWMU 5). The treated waste oil was determined by Borg-Warner to be nonhazardous. The waste was removed by Pierce Waste Oil (Pierce) of Springfield, Illinois, for refining. Information concerning rate of generation of this waste was unavailable.

Waste PCB-related material (other regulated material, ORM) was generated by the removal of PCB-contaminated oil from old transformers and the removal of contaminated concrete and soil. Generation rates for the PCB-contaminated oil were not available. In the past, the PCB-contaminated oil was treated and stored in the Former Emulsion-Breaking System (SWMU 5). The waste oil was transported off site for incineration, fuel blending, or refining by Pierce Waste Oil of Springfield, Illinois. Borg-Warner removed 17.5 million pounds of PCB-related material from SWMU 5 in 1984 and DKMI removed 136,000 pounds of PCB-related material in 1990. The PCB-related materials were landfilled to Chemical Waste Management of Model City, New York, by Fort Trucking (location unknown). SWMU 3 and SWMU 7 are currently managing PCB-related material.

Cleanup waste has been generated from ongoing investigative and remedial activities at the facility. The waste codes for this material are unknown. At the time of the VSI, the waste consisted of nonhazardous soil cuttings from monitoring well installation. The cleanup waste is collected in drums in one of the Nonhazardous Waste Collection Areas (SWMU 17) and then transferred to the Outdoor Drum Storage Area (SWMU 7). Facility representatives could not provide the rate of generation of this waste; however, during the VSI, there were 211 drums present at the facility. Zexel has not yet disposed of the material.

According to undated Borg-Warner architect drawings of the Decatur building, a tannerizing room, a plating room, and a chromate wash room were located towards the west side of the building (Zexel, 1992b). The drawings indicate that a separate sewer line was added to connect these areas to the Former Sewage Disposal System (SWMU 3). Although no specific information was identified from facility representatives or the PA, tanning and plating waste (waste code unknown) is included to

refer to the effluent carried by the sewer line to SWMU 3. SWMU 3 ultimately discharged the tanning and plating waste to the tributary to Spring Creek.

2.4 HISTORY OF DOCUMENTED RELEASES

This section discusses the history of documented releases to ground water, surface water, air, and on-site soils at the facility. There have been six documented releases; in 1972, 1974, 1984, 1985, 1990, and 1992. Additionally in 1992, Zexel notified IEPA about the identification of five problem areas at the facility.

Notes on an undated Decatur property drawing indicate the sand beds of the Former Sewage Disposal System (SWMU 3) were overflowing at a rate of 100 gallons per minute (gpm) to the Tributary to Spring Creek Area (AOC 2) on July 28, 1972 (Zexel, 1992b). The bypass sewer from the Imhoff Tank, also part of SWMU 3, was noted as flowing at a rate of 12 gpm on that date. Another drawing note, at the storm sewer outfall to the tributary to Spring Creek, indicates a flow of 1.5 gpm of rusty orange-appearing material. Borg-Warner was the owner of the facility at that time.

On September 16, 1974, Borg-Warner reported an oil spill to IEPA (Borg-Warner, 1974). In the letter, Borg-Warner indicated that sludge was released to Spring Creek and the Sangamon River. The release occurred during activities to transfer sludge from an earthen reservoir to a lagoon (presumably a PCB-contaminated oil storage pond and the U-shaped lagoon that are part of SWMU 5), which was in the process of being filled following its discontinued use. A plug in the lagoon dam loosened allowing sludge to flow out of the lagoon. An oil slick was observed on Spring Creek and the Sangamon River. The oil slick on the Sangamon River was 75 feet by 125 feet in size.

Natural dams of trees and debris and a secondary dam of straw and wire contained the oil slick on the Sangamon River. Five straw dams were constructed across Spring Creek. The straw and oil was removed from the Sangamon River by Rhodes Sewer Service and the banks were washed with water from a fire hose. The same procedure was used to clean up Spring Creek. According to the letter, the entire cleanup was observed by either EPA or IEPA, and representatives of both agencies proclaimed the creek and the river to be satisfactorily cleaned (Borg-Warner, 1974).

On August 29, 1984, Borg-Warner notified EPA Toxic Substances Section about the closing of two PCB-contaminated oil storage ponds (part of SWMU 5) (Borg-Warner, 1984). This letter detailed the procedures followed during the closure process and indicated that activities were completed under Toxic Substances Control Act (TSCA) regulations. No correspondence was identified to indicate acknowledgement of the closure or that the closure was approved. As part of this project, 17.5 million pounds of PCB-related material was excavated and disposed off site by Chemical Waste Management of Emelle, Alabama, and the excavated area was backfilled with soil borrowed on site. Post-excavation samples indicated concentrations for total PCBs of up to 0.79 milligrams per kilogram (mg/kg).

During a 1985 RCRA inspection of Borg-Warner by IEPA, an oily waste was noted on the ground south of the (Zexel) manufacturing building (IEPA, 1985a). A pond of liquid was held in the Surface Water Detention Area (AOC 1). According to the inspection report, the liquid contained a 1-inch-thick oil-like coating. At that time, a Borg-Warner representative indicated to the inspector that the oil was the result of a recent release of used oil from a UST, which was part of the Former Emulsion-Breaking System (SWMU 5). The release was apparently due to overfilling of the tank. No other details about the date or amount of the release were available at that time. The spilled material was described as mostly water-soluble waste cutting oils with smaller amounts of straight oils (hydraulic oils, lubricating oils, etc.) (IEPA, 1985a).

According to the IEPA inspector, it appeared that there may have been other spills in the vicinity of AOC 1. A stain originated from a valve at the base of the south end of the dike and extended southwest. The evidence of erosion channels with dark stains indicated to the inspector that more than just water had been released from AOC 1. The stain continued to the edge of the woods, several hundred feet to the south of the dike. Contaminated soil was subsequently removed for disposal at Waste Hauling Landfill in Decatur, Illinois. A follow-up inspection report by IEPA indicated that areas of visible contamination had been cleaned up (IEPA, 1985b). There is no indication that post-excavation sampling occurred, but soil samples, presumably from the contaminated area, did not exhibit any hazardous characteristics.

At the time of the follow-up inspection, the inspector viewed two backfilled PCB-contaminated oil storage ponds (part of SWMU 5), which were closed in 1984. According to a

facility representative at that time, Borg-Warner had all PCB-related material (contaminated waste oil and soil) removed from the impoundments and the excavation backfilled with clean soil. The inspector indicated no knowledge of IEPA files for the cleanup. The Borg-Warner representative indicated that the cleanup was done with EPA (TSCA) guidance and the representative thought that IEPA was being kept informed.

On January 19, 1990, DKMI notified IEPA about the removal of an outdoor transformer pad located on the south side of the manufacturing building (DKMI, 1990a). The entire pad and adjacent soil was excavated to a depth of 1 foot. In all, 68 tons of PCB-related material (soil and concrete) were removed directly into hazardous waste dump trucks and removed to an unspecified hazardous waste landfill in New York. Post-excavation sampling indicated concentrations in the soil of up to 0.943 micrograms per gram (μg/g). No correspondence was identified to indicate acknowledgement of the closure or that the closure was approved.

On February 10, 1992, Zexel notified the U.S. Coast Guard National Response Center of the discovery of a past release of hazardous substances (Zexel, 1992a). As part of an environmental assessment of the property, soil and stream sediment samples were taken by Geraghty & Miller, Inc. (Geraghty & Miller), Zexel's environmental consultant. These samples indicated PCB concentrations of up to 5.4 mg/kg in the creek bed and 93 mg/kg at a depth of 10 feet in the soil borings. Other soil samples indicated the presence of benzo(b)fluoranthene and naphthalene at concentrations of 0.26 mg/kg and 7.9 mg/kg, respectively. Additionally, liquid in the Imhoff Tank (part of SWMU 3) contained PCB concentrations of 4.9 mg/L. Zexel was not able to identify the source, date, or volumes for the suspected release.

Following an inspection by IEPA Emergency Response Unit in May 1992, Zexel submitted a letter outlining the status of investigative and remedial activities at the facility (Haynes and Boone, 1992b). This letter identifies 5 potential problems: 1) the Imhoff Tank and dosing tank (part of SWMU 3); 2) a PCB-contaminated floor inside the Zexel manufacturing building; 3) a U-shaped settling lagoon (part of SWMU 5); 4) off-site contamination moving onto facility property; and 5) the ground water in the immediate vicinity.

An interior floor was contaminated with PCBs. This old concrete floor was scoured with a solvent-based wash, tested, and then sealed with two layers of epoxy (Haynes and Boone, 1992b). Therefore, it is not considered an AOC.

PCBs were also discovered in the U-shaped settling lagoon, which was part of SWMU 5.

Sampling of the Tributary to Spring Creek Area (AOC 2) indicated contamination by PCBs and TCE, but no contamination was identified in Spring Creek beyond the facility property. Related to the Former Sewage Disposal System (SWMU 3) is one discharge point which apparently discharge off-site contamination from the Decatur property onto the Zexel property. Contamination by volatile organic compounds (VOC) has been identified.

TCE contamination has been identified in the upper aquifer near the Rail Spur Area (AOC 3). PCBs were also discovered in AOC 3. Thirteen monitoring wells have been installed on the facility property. Zexel and its consultant are in the process of performing a Remedial Investigation/ Feasibility Study (RI/FS) to address the problems at the Zexel facility. These activities will not address problems at the Decatur facility.

2.5 REGULATORY HISTORY

On August 14, 1980, Borg-Warner filed a Notification of Hazardous Waste Activity with EPA and was assigned ID No. ILD 042 076 091 by EPA. This notification indicated generation and TSD activities and listed F002, F007, F008, F017 as wastes (Borg-Warner, 1980a). On November 19, 1980, Borg-Warner filed a RCRA Part A permit application with EPA (Borg-Warner, 1980b). This application indicated a 15,840-gallon capacity S01 container storage area. This unit corresponds to the Former Waste Storage Area (SWMU 1). The form also indicated F001, F002, F017, D002, D007, and U002 as wastes which were stored in SWMU 1.

On May 4, 1981, Borg-Warner filed a CERCLA Notification of Hazardous Waste Site with EPA (Borg-Warner, 1981a). This notification indicated organics, inorganics, solvents, and heavy metals were waste types from machining aluminum, steel, and cast iron. The dates of waste handling were indicated to be 1954 to present (1981). The Notification indicated 5,020 gallons of sludge and

liquid in tanks and a sludge bin. The corresponding SWMUs for these devices is not known. The notification also indicated that the material was manufacturing waste, which was transported by Waste Hauling of Decatur, Illinois, and Pierce of Springfield, Illinois, to their off-site facilities.

On March 31, 1982, Borg-Warner filed a revised RCRA Part A permit application with proper signatures. At that time, the facility indicated the location of a new Former Hazardous Waste Storage Area (SWMU 2), which replaced the Former Waste Storage Area (SWMU 1) (Borg-Warner, 1982a).

On April 21, 1982, additional changes were made to the RCRA Part A permit application, following discussions between EPA and Borg-Warner, but the corrected application was not attached to EPA's confirmation letter and was not available for review (EPA, 1982). The letter did not identify the specific changes that were made.

By September 9, 1982, IEPA had initiated a new file for Borg-Warner and assigned it the EPA ID No. ILD 079 152 518 (IEPA, 1982). It is not known whether this number was assigned to the Decatur property or only the Zexel property; facility maps show both properties. On October 13, 1982, Borg-Warner notified EPA that its RCRA Part A permit application was filed protectively (Borg-Warner, 1982b). This letter also indicated that two separate numbers were being used for the facility. The facility used ILD 042 076 091, as assigned by EPA in 1980, but EPA used ILD 005 077 250 on its correspondence. EPA indicated that the facility should use the latter number on all future correspondence. It is not known whether this number was assigned to the Zexel property or only the Decatur property.

In 1983, Borg-Warner indicated to IEPA that it was not required to complete a facility Annual Hazardous Waste Report because the facility was not a TSD facility, and was exempt from completing a Generator Annual Report because the facility was a small-quantity generator (Borg-Warner, 1983a). A letter to IEPA on June 21, 1983 indicated that the facility was not operating (Borg-Warner, 1983b). Borg-Warner notified EPA in January 1986 that (a part of) the facility was donated to the City of Decatur in August 1983 (Borg-Warner, 1986). This is the Decatur property. No correspondence was identified to indicate that the facility was closed or acknowledging that the it was not a TSD facility.

On March 28, 1988, Borg-Warner notified IEPA that operations had changed and the (Zexel) property was sold to Diesel Kiki USA Co., Ltd (Borg-Warner, 1988). The property was sold to Diesel Kiki USA Co., Ltd, on September 15, 1987 and June 1, 1988 (Haynes and Boone, 1992a).

On January 30, 1989, D.K. Manufacturing, Inc., filed a Notification of Hazardous Waste Activity as a generator with EPA (DKMI, 1989). The facility was assigned ID No. ILD 182 768 085. The notification indicated a 625 Southside Drive address and listed Diesel Kiki Co. LTD as the owner. It also indicated D002, D003, and F006 as wastes. The notification was for the Zexel property only, because the Decatur property was owned and occupied by the City or Decatur.

On August 1, 1990, Zexel notified IEPA that DKMI would change its name to Zexel Illinois, Inc., but the ownership would not change and the facility's ID No. remained ILD 182 768 085 (Zexel, 1990). On March 21, 1992, Zexel filed a Notification of Hazardous Waste Activity with IEPA, which indicated D000 Waste to be generated during the remediation of PCBs (Zexel, 1992c). On April 15, 1992, IEPA issued Zexel a new ID No. ILD 984 862 383. The notification was for the Zexel property only, including the Former Sewage Disposal System (SWMU 3).

IEPA conducted several RCRA inspections, which identified what were principally paperwork violations (IEPA, 1982; 1984; 1985a; 1985b). On January 18, 1990, IEPA conducted a RCRA Inspection (IEPA, 1990a). The Inspection Report indicated that the facility was regulated as a Generator and unpermitted TSD facility. The inspection was conducted by IEPA following receipt of a complaint regarding disposal of PCB-related material from this site (IEPA, 1990a). According to the Inspection Report, manifests provided by the facility at that time indicated proper disposal of the waste. At that time, it was determined that the facility inadvertently stored waste Freon in the Waste Freon AST (SWMU 6) for greater than 90 days.

IEPA issued DKMI a Pre-Enforcement Conference (PEC) Letter to discuss storage of hazardous wastes in SWMU 6 for greater than 90 days without a RCRA permit, and paperwork violations for lack of a contingency plan, a closure plan, and operating records (IEPA, 1990b). On March 21, 1990, EPA issued a Notice of Violation following the January 18, 1990, IEPA RCRA inspection for paperwork violations (EPA, 1990a). A PEC was held with IEPA on April 24, 1990. Most of the violations had been resolved. The Waste Freon AST (SWMU 6) required RCRA-closure

because it stored hazardous waste for greater than 90 days and DKMI agreed to submit a Closure Plan to IEPA for approval (DKMI, 1990b; IEPA, 1990c).

On May 24, 1990, DKMI submitted to IEPA a Closure Plan for the Waste Freon AST (SWMU 6) (DKMI, 1990c). On November 9, 1990, IEPA approved a revised closure plan for SWMU 6 submitted by Zexel (IEPA, 1990d). On April 8, 1992, IEPA notified Zexel that its closure activity report was reviewed as a Closure Plan modification request because sampling results had not been submitted to IEPA and no cleanup objectives had been established. A second revised closure plan for SWMU 6 was approved by IEPA on September 8, 1992 (IEPA, 1992). Sampling associated with the closure of SWMU 6 identified contamination in the Surface Water Detention Area (AOC 1), and IEPA included remediation of AOC 1 as part of the required closure activities for SWMU 6. At the time of the VSI, closure of SWMU 6 and AOC 1 had not been approved by IEPA, but closure activities were continuing.

Borg-Warner was granted an air permit from IEPA on February 4, 1976 (IEPA, 1976). This allowed operations at the 2195 South Elwin Road (Decatur) property.

On September 12, 1984, Borg-Warner notified IEPA about closure of two PCB-contaminated oil storage ponds (part of SWMU 5), which was completed under TSCA regulations and EPA jurisdiction. A total of 17,512,120 pounds of material was removed. Post-excavation soil samples contained PCB concentrations of 0.79 mg/kg, which were apparently below the recommended 1-2 parts per million (ppm) range. The excavation area was backfilled with soil borrowed on site (Borg-Warner, 1984). No correspondence was identified acknowledging or approving of the closure.

In 1981, Borg-Warner requested information about a National Pollutant Discharge Elimination System (NPDES) permit and was informed by IEPA, that a permit was not necessary for the facility at that time (Borg-Warner, 1981b; IEPA, 1981). On March 30, 1989, IEPA sent Borg-Warner a Compliance Inquiry Letter because the facility failed to submit Discharge Monitoring Reports as required by NPDES permit IL0064530 (IEPA, 1989). This permit was not available for review. Borg-Warner responded that it sold the facility on June 1, 1988 (Borg-Warner, 1989). Zexel maintains a Sanitary District of Decatur Discharge Permit (No. 170). This permit requires monitoring for metals, pH, total suspended solids, and biochemical oxygen demand.

There has been one CERCLA inspection at the site (E&E, 1983). In 1983, Ecology and Environment, Inc. (E&E), a contractor to EPA, conducted an inspection associated with a PA and Hazard Ranking System scoring (E&E, 1983). The facility scored 0 and the report recommended no further action.

Zexel, with its consultant Geraghty & Miller, is in the process of conducting an RI/FS and developing a program to remediate the contamination at the facility. As part of this process, Zexel has installed ground water monitoring wells and conducted testing of ground water, surface water, sediments, and on-site soils. Zexel has also conducted air and floor sampling within the manufacturing building. According to facility representatives, this work is being conducted without IEPA enforcement, but IEPA was informed of the preliminary sampling results and will be advised when the remediation program is developed. These activities are being conducted for the Zexel facility and will not address problems at the Decatur facility. The facility is currently regulated as a generator of hazardous waste and an unpermitted TSD facility.

2.6 ENVIRONMENTAL SETTING

This section describes the climate, flood plain and surface water, geology and soils, and ground water in the vicinity of the Zexel facility.

2.6.1 Climate

The climate in Macon County is typically continental, with cold winters, warm summers, and short period fluctuations in temperature, humidity, cloudiness and wind direction. The average daily temperature is 53.2 degrees Fahrenheit (°F) (NOAA, 1980). The lowest average daily temperature is 17.1°F in January. The highest average daily temperature is 88.0°F in July.

The total annual precipitation for the county is 39.12 inches (NOAA, 1980). The mean annual lake evaporation for the area is about 33.5 inches (USDC, 1968). The 1-year, 24-hour maximum rainfall is 4.76 inches (NOAA, 1980).

The prevailing wind is from the south. Average wind speed is highest in March at 12.1 miles per hour from the west-northwest. Average annual wind speed is 10.0 miles per hour from the south (NOAA, 1980).

2.6.2 Flood Plain and Surface Water

Zexel buildings and operations are located outside the 500-year flood plain, in an area of minimal flooding (FEMA, 1979). The nearest surface water body, a tributary to Spring Creek, is located on the property. Spring Creek is immediately west of the facility and is used for drainage purposes. This surface water body discharges to the Sangamon River, approximately 0.7 mile to the northwest.

The other major surface water body in the area is Lake Decatur, which is approximately 0.5 mile east and upgradient of the facility. This lake was created by flooding of the Sangamon River valley, and is used for recreational and municipal water supply purposes. The nearest wetland area, a palustrine, unconsolidated bottom, permanently flooded, excavated area, is approximately 0.5 acre in size and is located on site. Various other palustrine wetlands, greater than 2 acres in size, lie approximately 0.25 mile north of the facility along the Sangamon River (USDI, 1988).

Spring Creek and its tributary are located along the southwestern and western boundaries of the Zexel property. Surface water runoff from the area south of the manufacturing building drains into this creek. Spring Creek flows north-northwesterly and enters the Sangamon River approximately 0.7 mile northwest of the facility.

2.6.3 Geology and Soils

The facility is underlain by soils of the urban land complex. These areas are covered by pavement and buildings, and the original soil has been obscured by cutting and filling during construction. Surface runoff is rapid on urban land (USDA, 1990).

The unconsolidated deposits, or drift, underlying the site are made up of top soil and fill material consisting of gravel overlying a heterogeneous mixture of clay, silt, and gravel. This surface

layer of soil is approximately 5 feet deep. According to well logs for several wells drilled in the same township, range, and section as the facility, the uppermost drift material is yellow clay and is about 10 feet in depth. The next 10 feet of drift consist mostly of yellow sand, followed by approximately 35 feet of clay. About 40 feet of hardpan lies beneath the clay. Gravel and sand make up the bottommost layer of glacial drift and extend for approximately 10 feet (ISWS, 1992).

The total thickness of drift deposits is estimated to be 105 feet. The top 10 feet of glacial deposits belong to the Wedron Formation. Below the Wedron Formation lies the Glasford Formation (Kempton, et al., 1982).

The uppermost layer of bedrock begins at a depth of 110 feet and is Pennsylvanian in age. Central-east Illinois bedrock formations consist of succession of sedimentary rocks several thousand feet thick, including sandstone, limestone, dolomite, shale, and coal (Kempton, et al., 1982). No further regional bedrock information was available. On-site monitoring well logs were not available at the time of the VSI.

2.6.4 Ground Water

Two aquifers exist in Macon County near the facility: the Glasford Formation Aquifer and the Wedron Formation Aquifer. The Glasford Formation Aquifer is of the Illinoisan Stage and is present between the Radnor and Vandalia Till Members. Near the facility, it occurs at depths from 15 feet to 110 feet. The Wedron Formation Aquifer is of the Wisconsinan Stage and Woodfordian Substage (Kempton, et al., 1982). It occurs at depths of 5 feet to 15 feet near the facility (ISWS, 1992). A small, shallow braided stream and till deposit occurs at the southeast corner of the Zexel building. This area, the Rail Spur Area (AOC 3), contains an upper aquifer which is contaminated with VOCs. The aquifer is confined by a 10-foot thick clay layer and ground water flow follows the stream bed towards the northeast. Ground water flow under the rest of the facility is to the south or northwest, following surface water flow.

2.7 RECEPTORS

The Zexel facility occupies 103 acres in an industrial, commercial, and residential mixed use area in Decatur, Illinois. The City of Decatur has a population of about 94,000.

The Zexel facility is bordered on the north by Southside Drive, a television station, and a sand and gravel operation; on the west by the open space followed by commercial and residential property; on the south by the Decatur Sports Foundation, the City of Decatur, and a country club; and on the east by the Illinois Central and Gulf Railroad. The nearest school, the Adams School, is located about 3,000 feet southeast of the facility.

The nearest surface water body, a tributary to Spring Creek, is located on the facility property and is used for drainage purposes. Other surface water bodies in the area include Spring Creek along the western edge of the property, Lake Decatur, located 0.5 mile east of the facility, and the Sangamon River, located 0.7 mile north of the facility.

Ground water is not used as the primary water supply. The nearest private drinking water well is NON- RESPONSIVE NON-RESPONSIVE (IEPA, 1992).

Sensitive environments are located on site. The nearest sensitive environment, a palustrine, unconsolidated bottom, permanently flooded, excavated wetland approximately 0.5 acre in size, is located on site. Several other palustrine wetlands greater than 2 acres in size are located about 0.25 mile north of the facility.

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the 17 SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of documented releases, and RAI's observations. Figures 2 and 3 shows the SWMU and AOC locations.

SWMU 1 **Former Waste Storage Area**

Unit Description: The Former Waste Storage Area consisted of a 24-foot by 48-foot concrete slab (formerly a garage) located outdoors at the northwest corner of the Decatur building. The unit, used for container storage, was located 41 feet west of the building and had a north-south orientation. The area was formerly a waste storage area according to Facility Representatives. Facility representatives and a review of files failed to provide additional information about this unit.

Date of Startup: The startup date for this unit is unknown. The unit was listed on the RCRA Part A permit application in 1980 as an S01 container storage unit, but Zexel facility representatives indicated that use may have begun as early as 1960.

Date of Closure: This unit has been inactive since approximately 1982. According to Borg-Warner, this unit did not store hazardous waste for greater than 90 days. However, no correspondence was identified acknowledging this by EPA or IEPA.

Wastes Managed: This managed waste TCE (F001). The unit may also have managed empty drums. The waste TCE was removed from the facility for reclaiming or fuel blending. The area currently manages yard waste.

Release Controls:	This unit was a garage during the time it was used as a waste storage area. It is unknown of it contained any release controls during its use.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	The unit contained no hazardous materials during the VSI. At the time of the VSI, the unit was covered by dirt and leaf ash. The vicinity of this SWMU is currently used to manage and burn leaves and the integrity of the pad could not be evaluated (see Photograph No. 1).
SWMU 2	**Former Hazardous Waste Storage Area**
Unit Description:	The Former Hazardous Waste Storage Area consisted of a 24-foot by 48-foot concrete pad located outdoors, at the northwest corner of the Decatur Building. The unit, used for container storage, is located 58 feet south of SWMU 1 and 42.5 feet west of the building and had an east-west orientation. The concrete pad is approximately 8 inches thick.
Date of Startup:	This unit began operation in approximately 1982. The unit was listed on a revised RCRA Part A permit application as an S01 container storage unit.
Date of Closure:	This unit has been inactive since 1983. According to Borg-Warner, no wastes were generated by the facility during 1983 and wastes were accumulated for less than 90 days. However, no correspondence was identified acknowledging this by EPA or IEPA.
Wastes Managed:	This unit managed waste TCE (F001). The waste was removed from the facility for reclaiming or fuel blending.

Release Controls: The unit apparently had a 6-inch concrete berm surrounding the pad. It is unknown whether additional release controls existed during the active life of this unit.

History of Documented Releases: No releases from this unit have been documented.

Observations: The unit contained no hazardous materials at the time of the VSI; the unit was partially covered by dirt, yard waste ash, and general refuse. The vicinity of this SWMU is currently used to manage and burn yard waste and immediately west of the pad was a pit filled with wood and yard waste. A large air recirculator, used to facilitate the burning of yard waste, was located next to the pit. The integrity of the pad could not be evaluated, although the berm along the west edge was damaged by pit excavation (see Photograph No. 2).

SWMU 3 **Former Sewage Disposal System**

Unit Description: The Former Sewage Disposal System consisted of a grease trap, Imhoff Tank, dosing tank, sand filters, and a sludge drying bed located approximately 400 feet northwest of the Decatur building. The unit was connected to the building by 10-inch vitreous sewer tile.

The grease trap is 6 feet by 4 feet by 4.5 feet deep. The grease trap has 8-inch concrete walls and a cypress wood cover. The Imhoff Tank is 24 feet by 14 feet by 26.25 feet deep, with concrete walls at least 12 inches thick. The dosing tank is 22 feet by 25 feet by 4.75 feet deep. The dosing tank has 8-inch concrete walls. All of these are inground tanks finished at or near ground surface, with the tops open to the atmosphere. There are two sand filters, each 127 feet by 51 feet, with cypress distribution troughs through the middle of each filter. Sludge from the Imhoff Tank was siphoned to a 35-foot square

sludge drying bed with 8-inch thick concrete walls. Effluent from the sludge drying bed discharged to the sand filters. Effluent from the sand filters was discharged to the tributary to Spring Creek. The sand filters and the sludge drying beds all used sand over gravel as the filter medium.

This system was designed for the Mueller Company in 1942 and 1943 to replace a septic tank system, which was to be closed and abandoned. Sewage from the facility flowed to the grease trap. The effluent entered the Imhoff Tank, where sludge settled to the bottom. The effluent passed to the dosing tank, where it overflowed to the sand filters. Sludge from the Imhoff Tank was siphoned to the sludge drying beds. In addition, the grease trap was equipped with a by-pass sewer, which discharged directly into the tributary to Spring Creek. Initial plans indicate that the system received sanitary sewage from City of Decatur property buildings. According to architect drawings dated in 1950, Borg-Warner constructed a separate sewage system, which connected a tannerizing room and a plating room to an 80-foot by 20-foot earthen disposal basin (Zexel, 1992b). The disposal basin had 2.5-foot high earthen embankments, and was located between the buildings and the Imhoff Tank. The aerial photograph from 1950 shows a disturbed area, possibly the drainage basin, which is appropriately 200 feet by 40 feet, but the aerial photograph from 1960 shows a disturbed area which more closely approximates the plans.

Architect drawings from 1971 indicate that Borg-Warner had connected this second sewage system to the first sewage system. The drainage basin is not indicated on these 1971 drawings. The second sewer line is connected to the first sewer line and the Imhoff Tank and filter system. The drawings also indicate that a plating room is still connected to this sewage line.

Date of Startup:	This unit began operation in approximately 1942 or 1943. It is not known when the unit became filled with PCB-contaminated oil.
Date of Closure:	The unit is active. It is not known when the unit stopped managing sewage. This unit is filled with waste PCB-contaminated oil (ORM) from an unknown source.
Wastes Managed:	This unit contains waste PCB-contaminated oil. In the past, this unit managed tanning and plating waste. This unit discharged effluent from sand filters into a tributary to Spring Creek.
Release Controls:	The grease trap, Imhoff Tank, and dosing tank are concrete. It is unknown what monitoring or release controls were in use in the past. The system is equipped with a by-pass sewer which discharges directly into the tributary to Spring Creek.
History of Documented Releases:	PCB and metals contamination have been identified in the vicinity of this unit. In 1972, this unit was releasing effluent to the tributary to Spring Creek (Zexel, 1992b). TCE has also been identified in the tributary to Spring Creek (Haynes and Boone, 1992b).
Observations:	The unit contained waste PCB-contaminated oil during the VSI. Zexel plans to contract for the removal of the material in the tanks and have the tanks cleaned and secured. Zexel has erected fences around the grease trap, Imhoff Tank, and dosing tank. According to Zexel representatives during the VSI, the sewer line to the Imhoff Tank has been disconnected. The fluid level in the Imhoff Tank was reduced to minimize the potential for a release from the tank, but the level is still increasing. The sand filters and the sludge drying beds are completely overgrown with vegetation and trees. The outfalls at the tributary to Spring Creek are still releasing fluid and the water in the Tributary to

Spring Creek Area (AOC 2) is intermittently covered by a thin oily sheen (see Photograph No. 3).

SWMU 4 **Former Waste Container Storage Area**

Unit Description: The Former Waste Container Storage Area is located indoors in a separate building, the former oil house, located immediately south of the Zexel manufacturing building. The building is constructed of cinderblock with a concrete floor and has the appearance of a multi-car garage. There is a floor trench across the entrance. Wastes were apparently stored in the southwest corner of the westernmost room. However, a 1990 inspection photograph record indicates waste may have also been stored in the southeast corner of the easternmost room.

Date of Startup: This unit may have began operation as early as 1960.

Date of Closure: This unit has been inactive since 1990. According to facility representatives, no wastes were managed for greater than 90 days and consequently, the unit would not require RCRA closure.

Wastes Managed: This unit managed Freon still bottoms (F001). This waste was removed off site for reclaiming or fuel blending.

Release Controls: The floor is coated with epoxy sealant. There is a floor trench across the entrance. The trench formerly discharged to the Surface Water Detention Area (AOC 1) but now is connected to a dead sump.

History of Documented Releases: No releases from this unit have been documented.

Observations: The unit contained no wastes during the VSI. The unit was clean and the floor was without cracks. RAI noted no evidence of release. The

unit is currently being used for the parking of automobiles (see Photograph No. 4).

SWMU 5 **Former Emulsion-Breaking System**

Unit Description:

The Former Emulsion-Breaking System was located indoors and outdoors at the south side of the Zexel manufacturing building. The system consisted of pipes from concentrated liquid waste collection pumping stations located inside, to three 15,000-gallon concentrated liquid waste USTs located outside. The waste was then transferred to a 2,000-gallon AST batch-type emulsion-breaking system, the process details of which are unknown. The treated effluent went to an oil-sludge separator and the disposable waste went to a 1,000-gallon aboveground disposable waste receiving tank and subsequently to two 15,000-gallon disposable waste USTs. There were seven tanks; five USTs and two ASTs. The oil-sludge separator is a double straight-line oil and sludge separator. The water effluent was discharged to a U-shaped settling lagoon and the oil was discharged to two PCB-contaminated oil storage ponds.

By 1985, the Former Emulsion-Breaking System was modified so that the waste was pumped into one of two 1,000-gallon tanks in the boiler room where it was heated. A polymer was added and the pH adjusted (if needed). The waste was agitated. After the oil and water phases separated, the water phase went to aerator tanks located outside, south of the Zexel manufacturing building (where it was sprayed into the air) and then discharged to the Sanitary District of Decatur. The oil phase went into one of the USTs.

The U-shaped settling lagoon covered 221,000 square feet (5.078 acres) and discharged to the tributary to Spring Creek through a discharge stream at the east end of the south loop. Following

	inactivity of the settling lagoon, water went to an aerator prior to discharge to the sanitary sewer. The two PCB-contaminated oil storage ponds were each 5,200 square feet (0.12 acres). The oil waste in the USTs and the PCB-contaminated oil storage ponds was removed by Pierce Waste Oil Company of Springfield, Illinois.
Date of Startup:	This unit began operation in approximately 1955 to 1960.
Date of Closure:	The emulsion-breaking system has been inactive since approximately 1985, although components of the system are still in use. In 1984, Borg-Warner removed 17.5 million pounds of PCB-related material from the PCB-contaminated oil storage ponds. No correspondence was identified which indicates acknowledgment or approval of this TSCA closure by EPA or IEPA. The U-shaped lagoons have been inactive since about 1974. All five USTs were removed by Borg-Warner prior to 1987. The oil-sludge separator and the aerator tank are currently in use as the final stages of the Chromium Wastewater Treatment System (SWMU 13) prior to discharge to the SDD sewer.
Wastes Managed:	This unit managed waste PCB-related material (ORM) and oily waste.
Release Controls:	The U-shaped settling lagoon and the PCB-contaminated oil storage ponds were land-based, unlined impoundments. The oil-sludge separator and the aerator tanks are constructed of 12-inch thick concrete. It is unknown whether the USTs had any release controls or monitoring devices.
History of Documented Releases:	During 1984, 17.5 million pounds of soil were removed from the PCB-contaminated oil storage ponds. PCB concentrations remaining in the soil, following soil removal and closure, were 0.79 mg/kg.

Observations: The unit contained noncontact cooling water and storm water during the VSI. The U-shaped settling lagoon is no longer in use and the PCB-contaminated oil storage ponds have been filled in. According to facility representatives, the five USTs were removed by Borg-Warner. RAI noted no evidence of release (see Photograph No. 5).

SWMU 6 **Waste Freon AST**

Unit Description: The Waste Freon AST is a 14,000-gallon horizontal steel AST located outside along the south wall of the Zexel manufacturing building. This unit was inadvertently used by DKMI to manage waste Freon for greater than 90 days while four in-line (closed-loop) Solvent Stills (SWMU 16) were installed on facility degreasers. The tank is underlain by a concrete pad which is sloped and drains to a dead sump. This area formerly drained to AOC 1.

The inadvertent storage for greater than 90 days necessitated closure of this unit. Closure activities included washing the tank and cleaning the concrete containment pad. Soil samples taken from the Surface Water Detention Area (AOC 1) indicate contamination by VOCs, semivolatile compounds and metals.

Date of Startup: This unit began operation in 1989.

Date of Closure: This unit has been inactive since 1990, and, at the time of the VSI, was undergoing RCRA closure according to an IEPA-approved closure plan.

Wastes Managed: This unit managed waste Freon (F001). The waste is presently processed by on-site, closed-loop Solvent Stills (SWMU 16).

Release Controls:	The AST is located within a concrete secondary containment structure, approximately 40 feet by 60 feet, with a 3.5 foot cinderblock wall on two sides and a 9-inch-high concrete pad on two sides, to direct runoff to a subsurface drain system. The drain system was connected to a clay-lined Surface Water Detention Area (AOC 1). This drain system has been closed and the structure now drains to a dead sump with no outlet.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	The unit was apparently empty during the VSI. The concrete pad under the AST was clean and without cracks; however, the pad does contain cracks under other tanks also located within the containment structure. RAI noted no evidence of release (see Photograph No. 6).
SWMU 7	**Outdoor Drum Storage Area**
Unit Description:	The Outdoor Drum Storage Area is located outdoors along the south side of the Zexel manufacturing building. The area is approximately 50 feet by 25 feet. All 55-gallon steel drums are managed on spill containment skids and stored up to two drums high. The area is surrounded on two sides by a 6-inch concrete berm and on the third side by a 3.5-foot high cinderblock retaining wall. The concrete pad slopes towards the building (north). The unit manages drums of waste PCB-related material and cleanup waste, primarily soil cuttings from monitoring well installation.
Date of Startup:	This unit began operation in 1992.
Date of Closure:	This unit is active.

Wastes Managed: This unit manages Freon-contaminated rinsate (F001), waste PCB-related material, and nonhazardous cleanup waste. The area may have formerly stored empty product drums.

Release Controls: The drums are managed on spill containment skids. The concrete pad is surrounded by berms and a containment wall on three sides. The concrete pad is sloped towards the building (north). A manhole is located 15 feet away from the unit. According to facility representatives, its connection is unknown, but they indicated it may connect to the SDD sewer.

History of Documented Releases: No releases from this unit have been documented.

Observations: The unit contained approximately 200 drums during the VSI. According to facility representatives and the labels, the drums contained waste PCB-related material (ORM) and nonhazardous cleanup waste, primarily soil cuttings from monitoring well installation. The concrete pad was clean and without staining. There are a few cracks in the concrete, but at the time of the VSI, the pad was holding precipitation water from a recent rain. RAI noted no evidence of release (see Photograph No. 7).

SWMU 8 **Dumpster Areas**

Unit Description: The unit consists of steel dumpsters used to manage various wastes. The dumpsters are located in several areas outside, on the south side and at the southeast corner of the Zexel manufacturing building. The dumpsters are approximately 20 cubic yards in size. The chromium filter cake dumpster and one scrap metal dumpster are covered and liquid-tight, and the other scrap metal dumpsters are open and unlined. The dumpsters are all located on concrete or asphalt pads.

Date of Startup:	This unit began operation in 1988.
Date of Closure:	This unit is active.
Wastes Managed:	This unit manages chromium filter cake (F019), waste paint-related material (F003) and nonhazardous scrap metal, waste test filters, and waste metal slag in separate dumpsters.
Release Controls:	The chromium filter cake and waste test filters are managed in liquid-tight, covered containers. The dumpsters are all located over concrete or asphalt pads. There are no drains in the vicinity and the area south of the manufacturing building drains to a dead sump.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	The unit contained chromium filter cake (F019), nonhazardous waste test filters, and nonhazardous scrap metal during the VSI. The concrete was clean in the vicinity of the dumpsters. RAI noted no evidence of a release (see Photograph No. 8)

SWMU 9 **Satellite Accumulation Areas**

Unit Description:	Satellite Accumulation Areas are located throughout the Zexel manufacturing building and in the engineering building. The unit consists of 55-gallon steel drums located indoors over spill containment skids. The floor at each indoor location was epoxy-coated concrete in the manufacturing building and tiled in the engineering building.
Date of Startup:	This unit began operation in 1988.

Date of Closure:	This unit is active.
Wastes Managed:	This unit manages Freon still bottoms (F001), waste paint-related material (F003), waste TCE and n-hexane (F002), TCA still bottoms (F001), waste R-11 (F001), and R-11 still bottoms (F001) in drums. These wastes are ultimately transferred to other SWMUs and picked up for off site disposal.
Release Controls:	The 55-gallon drums are managed indoors over containment skids. The concrete floor is coated with epoxy and floor drains are not present near storage areas in the manufacturing facility. One accumulation area in the engineering building is located near a floor drain but, according to facility representatives, the connection is unknown.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	The unit contained 55-gallon drums and containment skids during the VSI. The floors at each location were clean and without evidence of cracks (See Photograph Nos. 9 and 10). RAI noted no evidence of release. According to facility representatives during the VSI, waste R-11 is accumulated in a drum in one of the Satellite Accumulation Areas in the Q.A. Lab. This waste is then taken to the R-11 Reclaimer (SWMU 15). The R-11 still bottoms are then allowed to accumulate in a second drum, also one of the Satellite Accumulation Areas.

SWMU 10	**Waste Container Storage Area**
Unit Description:	The Waste Container Storage Area is located indoors in the Chip Room in the center along the east wall of the Zexel manufacturing building. The unit consists of less-than-90-day 55-gallon steel drum storage and a 1-cubic-yard box of scrap metal chips.
Date of Startup:	This unit began operation in 1988.
Date of Closure:	This unit is active for less than 90-day storage.
Wastes Managed:	This unit manages nickel filter cake (F019), Freon still bottoms (F001), waste paint-related materials (F003), waste TCE and n-hexane (F002), waste potassium hydroxide (D002), R-11 still bottoms (F001), used oil, waste metal slag, and scrap metal.
Release Controls:	The drums are managed on containment skids. The skids are located on an epoxy-coated concrete floor. The floor is sloped to a floor trench which acts as a dead sump in the event of a release.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	The unit contained 12 drums of hazardous waste and four drums of nonhazardous waste during the VSI. The unit also contained a cardboard box full of scrap metal chips. The floor was clean and without cracks. RAI noted no evidence of release (see Photograph No. 11.)

SWMU 11	**Chip Wringer**
Unit Description:	The Chip Wringer is located indoors in the Chip Room, in the center along the east wall of the Zexel manufacturing building. The unit is located adjacent to the Waste Container Storage Area (SWMU 10). The Chip Wringer consists of a metal hopper with a conveyor over a metal open-topped collection box. The device is used to separate the scrap metal chips from the used oil. The chips are placed in the hopper and the oils are collected in the open-topped collection box. The oils are drummed and taken to the ultrafilter (part of SWMU 12). The chips are collected in a second, separate cardboard box.
Date of Startup:	This unit began operation in 1988.
Date of Closure:	This unit is active.
Wastes Managed:	This unit manages nonhazardous scrap metal contaminated with oil. The scrap metal is removed for off-site recycling and the oils are treated in the ultrafilter (part of SWMU 12).
Release Controls:	The unit is located indoors over an epoxy-coated concrete floor trench which acts as a dead sump in the event of a release.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	The unit contained no waste at the time of the VSI. The floor was clean and without cracks. RAI noted no evidence of release (see Photograph No. 12).

SWMU 12	**Nickel Wastewater Treatment System**
Unit Description:	The Nickel Wastewater Treatment System is located indoors, in the center along the west wall of the Zexel manufacturing building. The unit consists of an automated reverse osmosis purifier and an ultrafilter. All waste from the reverse osmosis purifier is discharged to the SDD. Effluent from the ultrafilter is also discharged to SDD, and any oils are pumped to drums or piped directly to a 2,600-gallon steel indoor AST. Nickel filter cake (F019) is accumulated from a filter press directly into 55-gallon drums. The system can process 20 gallons per minute.
Date of Startup:	This unit began operation in 1988.
Date of Closure:	This unit is active.
Wastes Managed:	This unit manages nickel wastewater (F019), nickel filter cake (F019), and used oil.
Release Controls:	The unit is surrounded by a 4-inch concrete berm. The floor is epoxy-coated concrete. The floor has a trench which acts as a sump in the event of a release.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	The unit contained one partially-filled 55-gallon steel drum of nickel filter cake (F019) during the VSI. The floor was clean and without cracks. RAI noted no evidence of release (see Photograph No. 13).

SWMU 13 **Chromium Wastewater Treatment System**

Unit Description: The Chromium Wastewater Treatment Unit is located indoors in the center adjacent to the south wall of the Zexel manufacturing building. The unit consists of an automated system for chromium reduction and pH adjustment. The chromium wastewater is collected by gravity and pump in a 700-gallon collection tank. The wastewater is then pumped to a 400-gallon chromium reduction tank. It is then pumped to an 800-gallon pH adjustment tank. A polymer is added and the conditioned waste is put through a 288-cubic-foot clarifier and sand filter. The effluent is pumped to the oil-sludge separator, the aerator tanks, and then to the SDD sewer. The sludge from the clarifier is pumped to a filter press and the dewatered chromium filter cake is collected in a 1-cubic-yard metal hopper and the water is returned to the treatment system for recycling. The waste is then transferred to the chromium filter cake dumpster in one of the Dumpster Areas (SWMU 8) located outdoors, south of the Zexel manufacturing building. The unit is located in a room with a floor that is depressed approximately 4 to 9 inches. The floor is epoxy-coated concrete and contains two floor sumps to collect any releases. The system can process up to 32 gallons per minute.

Date of Startup: This unit began operation in 1988.

Date of Closure: This unit is active.

Wastes Managed: This unit manages chromium wastewater (D007) and chromium filter cake (F019).

Release Controls: The unit is located over an epoxy-coated concrete floor. The floor is depressed 4 to 9 inches and contains two floor sumps to collect any releases.

History of Documented Releases: No releases from this unit have been documented.

Observations: The unit contained one partially-full hopper of chromium filter cake during the VSI. The floor was clean and without cracks. RAI noted no evidence of release (see Photograph No. 14).

SWMU 14 **Waste TCA Storage Area**

Unit Description: The Waste TCA Storage Area is located indoors in the center along the south wall of the Zexel manufacturing building. Waste TCA (F001) from a degreaser is collected in a 550-gallon holding reservoir. The waste TCA is removed from the holding reservoir to 55-gallon drums, which are stored on spill containment skids adjacent to the holding tank.

Date of Startup: This unit began operation in 1988.

Date of Closure: This unit is active for less than 90-day storage.

Wastes Managed: This unit manages waste TCA (F001) and TCA still bottoms (F001). This waste may be accumulated in the unit or transferred to the Waste Container Storage Area (SWMU 10) prior to shipment off site.

Release Controls: The drums are managed on spill containment skids over an epoxy-coated concrete floor. No floor drains are located in the vicinity of the unit.

History of Documented Releases: No releases from this unit have been documented.

Observations: The unit contained three 55-gallon steel drums of waste during the VSI, in addition to the holding tank. The floor in the vicinity was

clean and without cracks and RAI noted no evidence of release (see Photograph No. 15.)

SWMU 15 **R-11 Reclaimer**

Unit Description: The R-11 Reclaimer is a solvent distillation unit constructed in a 55-gallon drum. The unit is located indoors in the northwest corner of the Zexel manufacturing building, in the engineering lab. The unit is located on a drum stand on an epoxy-coated concrete floor. The R-11 Reclaimer is used infrequently, on an as needed basis. The waste R-11 is accumulated in a 55-gallon drum, one of the Satellite Accumulation Areas (SWMU 9). When full, the drum is transported to the R-11 Reclaimer. The waste R-11 is processed through the R-11 Reclaimer. The reclaimed material is returned to process and the waste R-11 is accumulated in a 55-gallon drum (part of SWMU 9). The drum is then transferred to the Waste Container Storage Area (SWMU 10).

Date of Startup: This unit began operation in 1988.

Date of Closure: This unit is active.

Wastes Managed: This unit manages waste R-11 (F001).

Release Controls: The unit is located indoors over an epoxy-coated concrete floor. The unit has no other release controls.

History of Documented Releases: No releases from this unit have been documented.

Observations: The unit contained one 55-gallon drum modified as a distillation unit during the VSI. The unit was not working at the time of the VSI.

	The floor in the vicinity of the unit was clean and without cracks. RAI noted no evidence of release (see Photograph No. 16.)
SWMU 16	**Solvent Stills**
Unit Description:	The Solvent Stills are closed-loop, in-line commercial distillation units. There are four Solvent Stills at the facility, located in the machining and assembly areas, but only three are in operation. There are two Solvent Stills for waste Freon and one Solvent Still for waste TCA. The Solvent Stills are connected directly to degreasers and return the solvent back to the degreasers by pipes. The solvent stills can reclaim approximately 80 gallons per day.
Date of Startup:	This unit began operation in 1990.
Date of Closure:	This unit is active.
Wastes Managed:	This unit manages waste Freon (F001), Freon still bottoms (F001), waste TCA (F001), and TCA still bottoms (F001).
Release Controls:	The unit is located indoors over an epoxy-coated concrete floor. The unit has no other release controls.
History of Documented Releases:	No releases from this unit have been documented.
Observations:	The unit contained three closed-loop stills. The floor in the vicinity of the unit was clean and without cracks. RAI noted no evidence of release (see Photograph No. 17.)

SWMU 17	**Nonhazardous Waste Collection Areas**
Unit Description:	The unit consists of containers for the collection of nonhazardous wastes. The collection containers are located throughout production areas. The containers include 1-cubic-yard metal hoppers for accumulation of scrap metal and waste filters, and 55-gallon steel drums for the collection of used oil, waste metal slag, and cleanup wastes. Used oil is also collected in a 300-gallon tank. All of the collection containers are located indoors over an epoxy-coated concrete floor, with the exception of one scrap metal container which is located outdoors, on an asphalt pavement, south of the engineering and research development building. The collection containers are transferred to the Waste Container Storage Area (SWMU 10), dumpsters in the Dumpster Areas (SWMU 8), the Outdoor Drum Storage Area (SWMU 7), or the Nickel Wastewater Treatment System (SWMU 12).
Date of Startup:	This unit began operation in 1988.
Date of Closure:	This unit is active.
Wastes Managed:	This unit manages nonhazardous used oil, waste metal slag, waste test filters, scrap metal, and cleanup waste.
Release Controls:	The containers are located indoors over an epoxy-coated concrete floor, or outdoors on asphalt pavement. The unit has no other release controls.
History of Documented Releases:	One outdoor metal hopper of scrap metal was leaking at the time of the VSI.

Observations: The floor in the vicinity of the indoor containers was clean and without cracks. RAI noted no evidence of release from these indoor containers. However, one outdoor container, which was collecting scrap metal was leaking an oily fluid onto the asphalt pavement. The pavement is cracked near the leaked fluid (see Photograph No. 18.)

4.0 AREAS OF CONCERN

RAI identified four AOCs during the PA/VSI. These AOCs are discussed below; their locations are shown in Figure 2.

AOC 1 — Surface Water Detention Area

The Surface Water Detention Area is located outdoors, south of the Zexel manufacturing building, in between the aerator ponds (part of SWMU 5) and a 1.2 million-gallon No. 5 fuel oil AST. This clay-lined surface impoundment has approximately 16,640 square feet and is created behind an earthen dike designed to collect surface water runoff, prior to discharge to the tributary to Spring Creek. There is a hand-operated release valve at the base of the dike to allow discharge of storm water to the tributary to Spring Creek. This area previously received the discharge from the secondary containment structures along the south wall of the manufacturing building. This area was the receptor of a release of used oil from USTs in 1985 and was the source of a release of unknown material to the tributary to Spring Creek in 1985. The area contains a former oil loading pad and the east side of the area has been partially filled with soil. Soil testing by Zexel has indicated the presence of volatile and semi-volatile compounds. Toluene was identified in concentrations up to 180 μg/kg and phenanthrene was identified in concentrations up to 2,400 μg/kg.

In 1985, a RCRA Interim Status Standards Inspection identified a spill from this area. The spill was of water and an "oily waste", due to the overfilling of a UST. The inspector described the material in the unit as mostly water with a 0.5-inch to 1-inch thick oil-like coating. Facility representatives indicated to the inspector that the amount discharged was "fairly insignificant".

The spilled material was mostly water-soluble waste cutting oils with smaller amounts of straight oils, hydraulic oils, lubricating oils, etc. Dark stains were found on the ground by the pipes to the USTs. The inspector concluded that there had been other spills in the area (IEPA, 1985a). During the inspection of the earthen dike, a dark stain was noted originating from the valve at the base of the southside of the dike and trending southwest. There was evidence of erosion channels with dark stains which indicated to the inspector that more than just water was released from the unit. The stains occurred to the edge of a wooded area south of the unit.

A subsequent 1985 inspection by IEPA of the area of the spill indicated that all stained soil had been removed by Borg-Warner and disposed off site. According to the inspector, all visible contamination was removed, but the PA files do not indicate whether any sampling was performed (see Photograph No. 19).

AOC 2 **Tributary to Spring Creek Area**

The Tributary to Spring Creek Area is located in the center of the Zexel property, south of the Zexel manufacturing building and north of the Decatur building. This tributary enters Spring Creek immediately west of the facility, and Spring Creek enters the Sangamon River about 0.5 mile north of the facility. This area receives the discharge from the former Sewage Disposal System (SWMU 3) and in 1972, was receiving water directly from the Imhoff Tank bypass. AOC 2 was the receptor of an oil release in 1974. It may also have received a release of unknown material from AOC 1 in 1985. Surface water and sediment sampling performed by Zexel indicates contamination by VOCs and PCBs. Surface water contained the following VOCs: TCE (2,400 μg/L), vinyl chloride (280 μg/L), and 1,2-dichloroethylene (6,000 μg/L) and surface sediment samples

had concentrations of PCBs up to 5.4 mg/kg (see Photograph No. 20) (Haynes and Boone, 1992b).

AOC 3 **Rail Spur Area**

The Rail Spur Area is located outdoors at the southeast corner of the Zexel manufacturing building. The area east of the building is paved with asphalt and concrete and is occupied by loading docks and one of the Dumpster Areas (SWMU 8). South of the building is a grassy area and an asphalt roadway. According to facility representatives, chemicals have not been managed in this area, but an aboveground storage tank for TCE is located south of the roadway. There may be an abandoned trench system designed to carry used oil to a UST in this area, for later disposal. Ground water testing has revealed contamination by TCE up to 6 μg/L (see Photograph No. 21).

AOC 4 **Decatur Building Area**

The Decatur Building Area was formerly occupied by Mueller and Borg-Warner. Architects drawings from 1955 show the plan for a quench oil system. These drawings indicate the presence of three USTs, but because the plans are in schematic form, the exact location of these tanks cannot be determined. An undated floor plan showing control areas indicates the possible presence of a plating room and a chromate wash room towards the west side of the building, and gasoline and kerosene USTs towards the south end of the building. The map also indicates an ammonia AST and gasoline USTs north of the building. Remnants of ASTs were visible north of the facility during the VSI. No other information about any of these tanks is available, and consequently, this area is considered an AOC (see Photograph No. 22).

16 Pages Removed

Non-Responsive

REFERENCES

Borg-Warner Corporation (Borg-Warner), 1974. Letter from C.I. Flemming, Plant Manager, to G. Tim Achman, Illinois Environmental Protection Agency (IEPA), regarding (RE:) oil spill, September 16.

Borg-Warner, 1980a. Notification of Hazardous Waste Activity, August 14.

Borg-Warner, 1980b. RCRA Part A permit application, November 19.

Borg-Warner, 1981a. Notification of Hazardous Waste Site, May 4.

Borg-Warner, 1981b. Letter to IEPA RE: National Pollutant Discharge Elimination System (NPDES) Permit, June 4.

Borg-Warner, 1982a. Revised RCRA Part A Permit Application, March 31.

Borg-Warner, 1982b. Letter from Tom Quick, Plant Engineer, to Arthur Kawatachi, Environmental Protection Agency (EPA). RE: protective filing of RCRA Part A permit application and assignment of two identification numbers.

Borg-Warner, 1983a. Letter to IEPA RE: Annual Reporting, February 2.

Borg-Warner, 1983b. Letter to IEPA RE: Facility closing, June 21

Borg-Warner, 1984. Letter from Robert Lane, Plant Engineer, to Karl Bremer, Chief, EPA Toxic Substances Section, RE: closing two PCB-contaminated oil storage ponds, August 29.

Borg-Warner, 1986. Letter from C.M. Jensen to EPA RE: donation of property, January 28.

Borg-Warner, 1987. CERCLA Notification of Hazardous Waste Site, May 4.

Borg-Warner, 1988. Letter from Laurene Horiszny to IEPA RE: sale of property, March 28.

Borg-Warner, 1989. Letter from Laurene Horiszny to IEPA RE: sale of property, April 12.

D.K. Manufacturing, Inc. (DKMI), 1989. Notification of Hazardous Waste Activity, January 30.

DKMI, 1990a. Facsimile transmission from Bill Wilson to Steven Townsend, Illinois Environmental Protection Agency (IEPA), RE: outdoor transformer pad removal, January 19.

DKMI, 1990b. Letter to IEPA RE: Closure of the Waste Freon AST (SWMU 6), May 4.

DKMI, 1990c. Closure plan for the Waste Freon AST (SWMU 6), May 24.

Ecology & Environment, Inc. (E&E), 1983. Preliminary Assessment and Hazard Rank Scoring, July 15.

Environmental Protection Agency (EPA), 1982. Confirmation of telephone discussion. RE: changes made on the RCRA Part A Permit Application, April 21.

EPA, 1990. Notice of Violation Letter to DKMI, March, 21.

Federal Emergency Management Agency (FEMA), 1979. Flood Insurance Rate Map, City of Decatur, Illinois, Macon County, Community Panel Number 170429 0015 C, August 1.

Haynes and Boone, LLP, 1992a. Letter to Borg-Warner RE: contamination at Zexel facility, February 11.

Haynes and Boone, LLP, 1992b. Letter to IEPA RE: contamination at Zexel facility, March 3.

IEPA, 1976. Air Operating Permit, February 4.

IEPA, 1981. Letter to Borg Warner RE: NPDES Permit, September 11.

IEPA, 1982. Preliminary Assessment and RCRA inspection, September 9.

IEPA, 1984. Preliminary Assessment and RCRA inspection, July 2.

IEPA, 1985a. Interim Status Standards (ISS) Inspection and Memo, June 20.

IEPA, 1985b. Follow-up ISS Inspection and Re-inspection of oily waste spill, October 24.

IEPA, 1989. Compliance Inquiry Letter to Borg-Warner RE: discharge monitoring reports, March 30.

IEPA, 1990a. RCRA Inspection Report, January 18.

IEPA, 1990b. Pre Enforcement Conference Letter to DKMI, March 19.

IEPA, 1990c. Letter to DKMI RE: closure of Waste Freon AST (SWMU 6), April 24.

IEPA, 1990d. Approval of closure plan, November 9.

IEPA, 1992. Approval of second revised closure plan, September 8.

Illinois State Water Survey (ISWS), 1992. Letter to Illinois Environmental Protection Agency, including well logs, for parts of Macon County, February 20.

Kempton, John P., Morse, Walter J., and Visocky, Adrian P., 1982. Hydrogeologic Evaluation of Sand and Gravel Aquifers for Municipal Groundwater Supplies in East-Central Illinois. State Geological Survey Division and State Water Survey Division, Champaign, Illinois.

National Oceanic and Atmospheric Administration (NOAA), 1980. Climatography of the United States No. 20: Decatur, Illinois.

U.S. Department of Agriculture (USDA), 1990. Soil Survey of Macon County, Illinois. Soil Conservation Service/Illinois Agricultural Experiment Station Soil Report No. 127; issued April.

U.S. Department of Commerce (USDC), 1968. Climatic Atlas of the United States. U.S. Government Printing Office, Washington D.C.

U.S. Department of the Interior (USDI), 1988. National Wetlands Inventory Map, Decatur, Illinois.

U.S. Geological Survey, 1975. Decatur Quadrangle, 7.5-minute series topographic map.

Zexel Illinois, Inc. (Zexel), 1990. Letter to IEPA RE: name change, August 1.

Zexel, 1992a. Facsimile transmission from Charlie Farley, Executive Vice President, to National Response Center, RE: hazardous substance release, February 10.

Zexel, 1992b. Information provided to Resource Applications, Inc., during the VSI, October 29 and November 4, 1992.

Zexel, 1992c. Notification of Hazardous Waste Activity, March 21.

ATTACHMENT A

EPA PRELIMINARY ASSESSMENT FORM 2070-12

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	ILD 984 862 383

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Zexel Illinois, Inc.	625 Southside Drive				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY**	**08 CONG**
Decatur	IL	62521	Macon	CODE 115	DIST 20

09 COORDINATES: LATITUDE 39° 49′ 15″. N | LONGITUDE 88° 58′ 00″. W

10 DIRECTIONS TO SITE *(Starting from nearest public road)*

Take US Highway 51 south through Decatur to Southside Drive. Take Southside Drive west 0.2 mile. Facility is to the south.

III. RESPONSIBLE PARTIES

01 OWNER *(if known)*	02 STREET *(Business, mailing residential)*		
Zexel U.S.A. Corporation	4395 Diplomacy Road		
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 TELEPHONE NUMBER**
Dallas	TX	76155	(817) 354-7990
07 OPERATOR *(If known and different from owner)*	**08 STREET *(Business, mailing, residential)***		
Zexel Illinois, Inc.	Southside Drive		
09 CITY	**10 STATE**	**11 ZIP CODE**	**12 TELEPHONE NUMBER**
Decatur	IL	62521	(217) 362-2313

13 TYPE OF OWNERSHIP *(Check one)*

☒ A. PRIVATE ☐ B. FEDERAL: _____ *(Agency name)* ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER _____ *(Specify)* ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE *(Check all that apply)*

☒ A. RCRA 3010 DATE RECEIVED: 08 / 14 / 80 (MONTH DAY YEAR) ☒ B. UNCONTROLLED WASTE SITE *(CERCLA 103 c)* DATE RECEIVED: 05 / 04 / 81 (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☒ YES DATE 10/ 29 / 92 ☐ NO 11/ 04/ 92

BY *(Check all that apply)*

☐ A. EPA ☒ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR ☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ *(Specify)*

CONTRACTOR NAME(S): Resource Applications, Inc.

02 SITE STATUS *(Check one)*	03 YEARS OF OPERATION
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN	1930 (BEGINNING YEAR) | Present (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Chromium, nickel, freon, paint-related materials, TCE, used oil, PCBs, TCA, and R-11 solvent.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

VOCs, semivolatile compounds, PCBs, and metals have been identified in ground water, surface water, and on-site soils.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION *(Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents.)*

☒ A. HIGH *(Inspection required promptly)* ☐ B. MEDIUM *(Inspection required)* ☐ C. LOW *(Inspect on time-available basis)* ☐ D. NONE *(No further action needed; complete current disposition form)*

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF *(Agency/Organization)*			03 TELEPHONE NUMBER
Kevin Pierard	EPA Region V			(312) 886-4448
04 PERSON RESPONSIBLE FOR ASSESSMENT	**05 AGENCY**	**06 ORGANIZATION**	**07 TELEPHONE NUMBER**	**08 DATE**
Jeff Indeck		Resource Applications, Inc.	(312) 332-2230	02 / 01 / 93 (MONTH DAY YEAR)

EPA FORM 2070-12(7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	ILD 984 862 383

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☒ C. SLUDGE
- ☐ D. OTHER _____ *(Specify)*
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

TON _____

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS *(Check all that apply)*

- ☒ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☒ G. FLAMMABLE
- ☒ H. IGNITABLE
- ☒ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	Unknown		
OLW	OILY WASTE	Unknown		
SOL	SOLVENTS	Unknown		
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	Unknown		
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES *(See Appendix for most frequently cited CAS Numbers)*

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	TCA	79-00-5	Drum	Unknown	
	TCE	79-01-6	Drum	Unknown	
	PCBs	1336-36-3	Drum/Land Disposal	Unknown	

V. FEEDSTOCKS *(See Appendix for CAS Numbers)*

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION *(Cite specific references; e.g., state files, sample analysis, reports)*

U.S. EPA Region 5 and IEPA files

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	ILD 984 862 383

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☒ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

TCE has been identified in ground water samples, but there are no wells down gradient of the facility and no wells finished in the upper aquifer.

01 ☒ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☒ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 94,000 — 04 NARRATIVE DESCRIPTION

TCE and PCBs have been identified in surface water samples.

01 ☒ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 350 — 04 NARRATIVE DESCRIPTION

VOCs have been identified in ground water, surface water, and on-site soils.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None. No fire or explosive conditions were identified.

01 ☒ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

The facility is partially fenced, and the potential for direct contact is low.

01 ☒ F. CONTAMINATION OF SOIL — 02 ☒ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED

03 AREA POTENTIALLY AFFECTED: 103 *(Acres)* — 04 NARRATIVE DESCRIPTION

VOCs, semi-volatile compounds, PCBs, and metals have been detected in on-site soils.

01 ☒ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

The contaminated upper aquifer is confined by a 10 foot thick clay layer. No wells are finished in this upper aquifer.

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 WORKERS POTENTIALLY AFFECTED: 350 — 04 NARRATIVE DESCRIPTION

None detected.

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 94,000 — 04 NARRATIVE DESCRIPTION

None detected.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
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II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

No damage to flora has been identified.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION (Include name(s) of species)

No damage to fauna has been identified.

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

No contamination of the food chain has been identified.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES — 02 ☒ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

TCA and PCBs are currently being discharged to the Tributary to Spring Creek. PCBs were managed in earthen pits.

01 ☐ N. DAMAGE TO OFF-SITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

No damage to off-site property has been identified.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS — ☐ OBSERVED (DATE: _) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

No contamination of sewers has been identified.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED

04 NARRATIVE DESCRIPTION

No illegal or unauthorized dumping has been identified.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 94,000

IV. COMMENTS

An RI/FS is being conducted by Zexel to characterize the site. Zexel plans to develop a program to remediate the contamination on site.

V. SOURCES OF INFORMATION *(Cite specific references; e.g., state files, sample analysis, reports)*

EPA Region 5 RCRA files and IEPA DLPC files.

ATTACHMENT B

VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

VISUAL SITE INSPECTION SUMMARY

Zexel Illinois, Inc.
625 Southside Drive
Decatur, Illinois 62521
ILD 984 862 383

Date:	October 29 and November 4, 1992
Primary Facility Representatives:	Robert Caston, Attorney, Zexel*
Other Facility Representatives:	Bill Wilson, Maintenance Manager, Zexel* Jim Wietholter, Executive V.P., Zexel Larry Gustafson, Attorney, Haynes and Boone for Zexel* Jim Hill, Principal Geologist, Geraghty & Miller for Zexel* William B. Sands, Director of Public Works, City of Decatur John W. Couter, Corporation Counsel, City of Decatur* Jim Harrington, Attorney, Ross & Hardies for City of Decatur Terry Alexander, Director of Client Services, Boelter Environmental* Kelly Van Kovering, Environmental Consultant, Boelter Environmental for Borg-Warner * Also present on November 4, 1992
Representative Telephone No.:	(217) 362-2300
Inspection Team:	Tony Dominic, Environmental Scientist, Resource Applications, Inc. (RAI) Jeff Indeck, Environmental Scientist, (RAI)* Dustin Burger, Environmental Protection Specialist, IEPA* * Also present on November 4, 1992
Photographer:	Tony Dominic, RAI
Weather Conditions:	Cool, overcast, temperature about 50°F on October 29, 1992. Calm, sunny, temperature about 35°F on November 4, 1992.
Summary of Activities:	The visual site inspection (VSI) began at 9:00 a.m. on October 29, 1992 with an introductory meeting. The inspection team explained the purpose of the VSI and the agenda for the visit. Facility representatives then discussed Mueller and Borg-Warner operations, solid wastes generated, and release history. Facility representatives provided the inspection team with copies of requested documents. Little information was available about site history or past operations. Most information was exchanged on a question and answer

basis, using aerial photos, architect drawings, and other file information as the starting point for the discussions. Zexel and city of Decatur representatives provided the inspection team with copies of available documents. Due to the size and complexity of the site, and prior commitments by the facility representatives, it was agreed to schedule a continuation of the inspection for the following week, when Zexel operations could be discussed and the facility inspected. The City of Decatur property, the Decatur Sports Foundation property, and the Zexel property south of the Tributary to Spring Creek were then viewed.

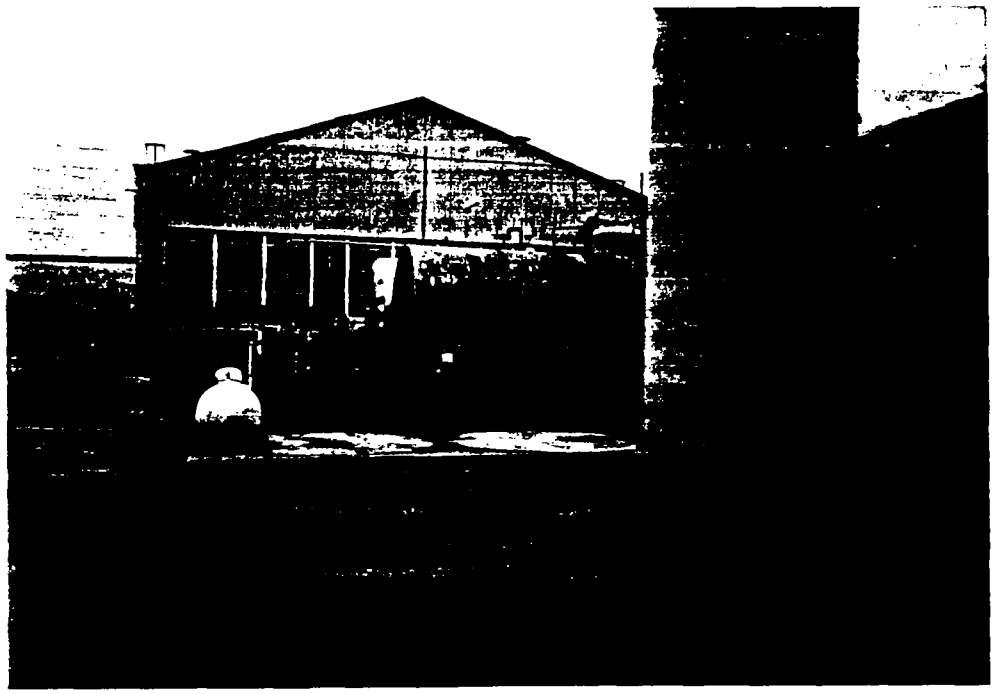
The VSI tour began at 1:30 p.m. on October 29, 1992. The former Sewage Disposal System (SWMU 3) and the outfalls at the Tributary to Spring Creek Area (AOC 2) were observed. Zexel representatives explained about measures taken to control the system and minimize any potential for releases to the environment. Next, the Former Waste Storage Area (SWMU 1) and the Former Hazardous waste storage Area (SWMU 2) were viewed along with the Decatur Building Area (AOC 4). Lastly, the Foundation property observed along with Spring Creek from the southwest corner of the property north to its confluence with the Tributary to Spring Creek were viewed.

The October 29, 1992, tour concluded at 4:30 p.m., due to darkness, after which the inspection team held an exit meeting with facility representatives. This part of the VSI was concluded and the inspection team left the facility at 5:30 p.m.

The VSI continued at 9:00 a.m. on November 4, 1992. Facility representatives discussed Zexel operations, solid wastes generated, and release history. Facility representatives provided the inspection team with copies of requested documents. Most information was exchanged on a question and answer basis.

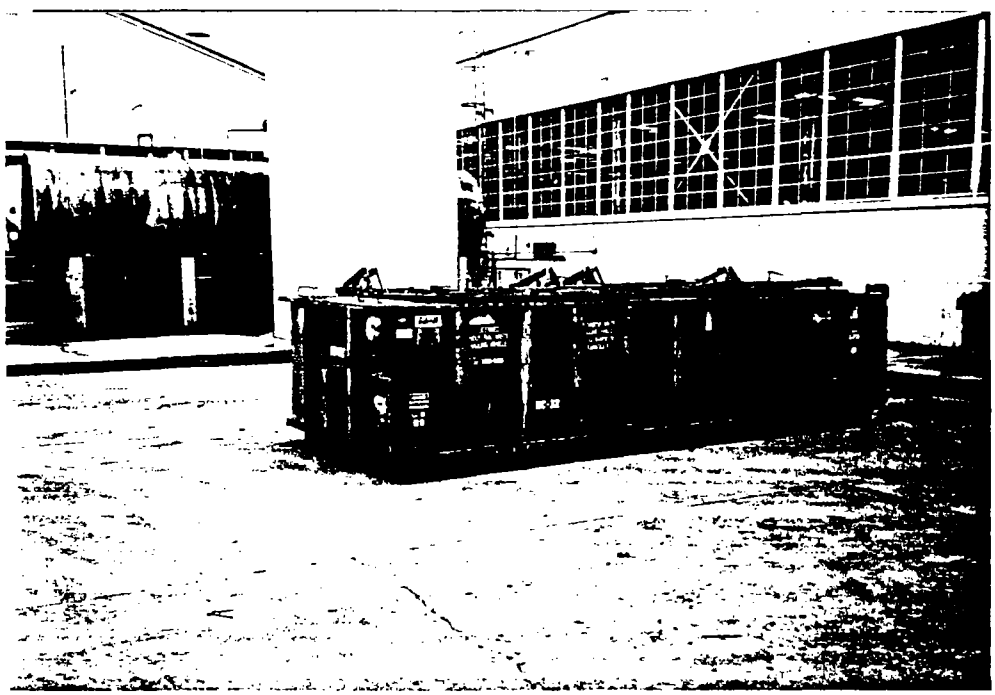
The VSI tour began at 1:00 p.m. on November 4, 1992. The remaining SWMUs, AOCs, and production areas at the Zexel manufacturing building, were observed. The tour concluded at 4:30, due to darkness, after which the inspection team held an exit meeting with facility representatives. The VSI was concluded and the inspection team left the facility at 5:30 p.m.

Photograph No. 5 Location: SWMU 5
Orientation: South Date: 11/4/92
Description: The Former Emulsion-Breaking System. This is the location of the closed PCB-oil storage ponds.



Photograph No. 6 Location: SWMU 6
Orientation: West Date: 11/4/92
Description: The Waste Freon AST is the horizontal tank located at the center of the photograph. This unit was undergoing RCRA closure with IEPA approval at the time of the VSI.

Photograph No. 7 Location: SWMU 7
Orientation: North Date: 11.4.92
Description: The Outdoor Drum Storage Area. The drums contain PCB-related material and cleanup waste from on-site remediation activities.

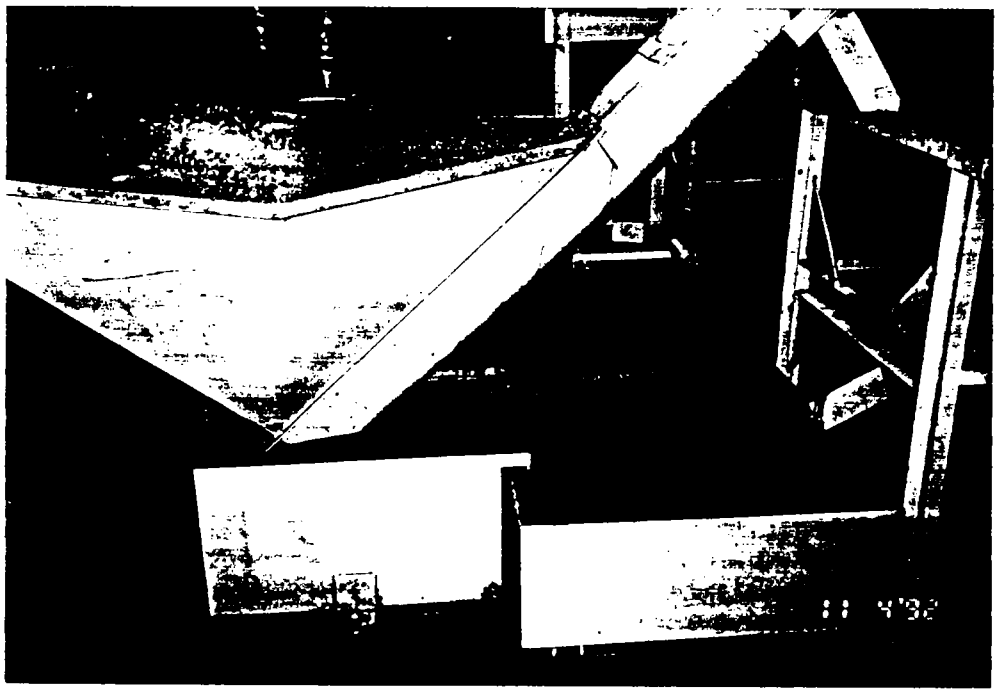


Photograph No. 8 Location: SWMU 8
Orientation: Northwest Date: 11.4.92
Description: This Dumpster Area contains chromium filter cake (F019). The dumpster is covered and liquid-tight. SWMU 6, the horizontal tank, is at the left of the photo.

Photograph No. 9 Location: SWMU 9
Orientation: North Date: 11/4/92
Description: One of the Satellite Accumulation Areas in the Zexel manufacturing building. Only one drum contains hazardous waste.

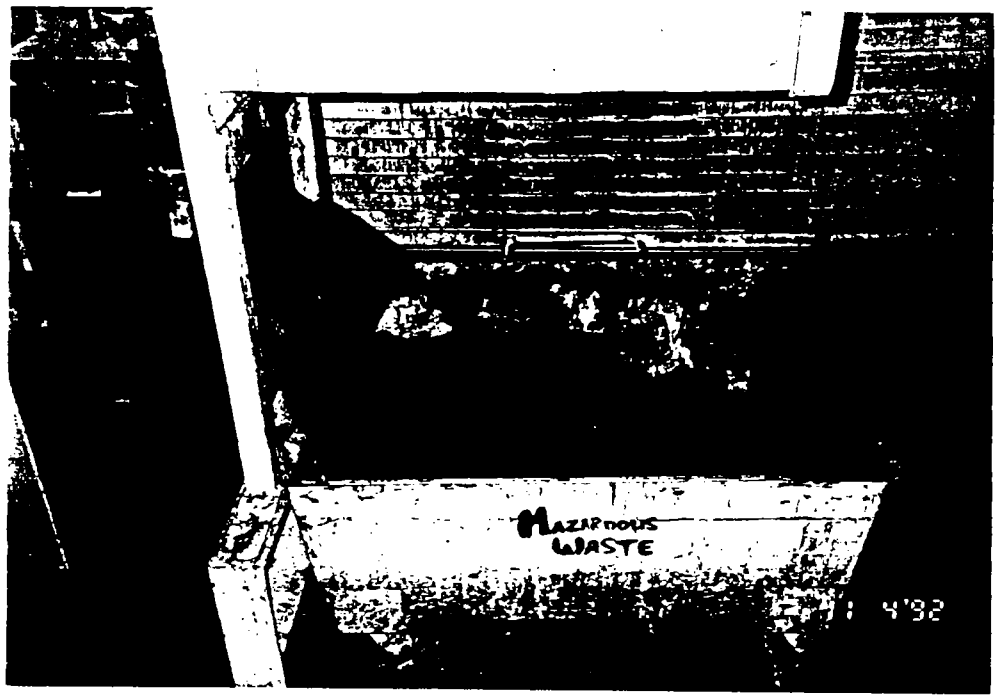
Photograph No. 10 Location: SWMU 9
Orientation: West Date: 11/4/92
Description: A Satellite Accumulation Area located in the manufacturing building. Behind this unit is a Nonhazardous Waste Collection Area (SWMU 17) for used oil.

Photograph No. 11 Location: SWMU 10
Orientation: West Date: 11/4/92
Description: The Waste Container Storage Area. This location in the Chip Room manages hazardous and nonhazardous waste.



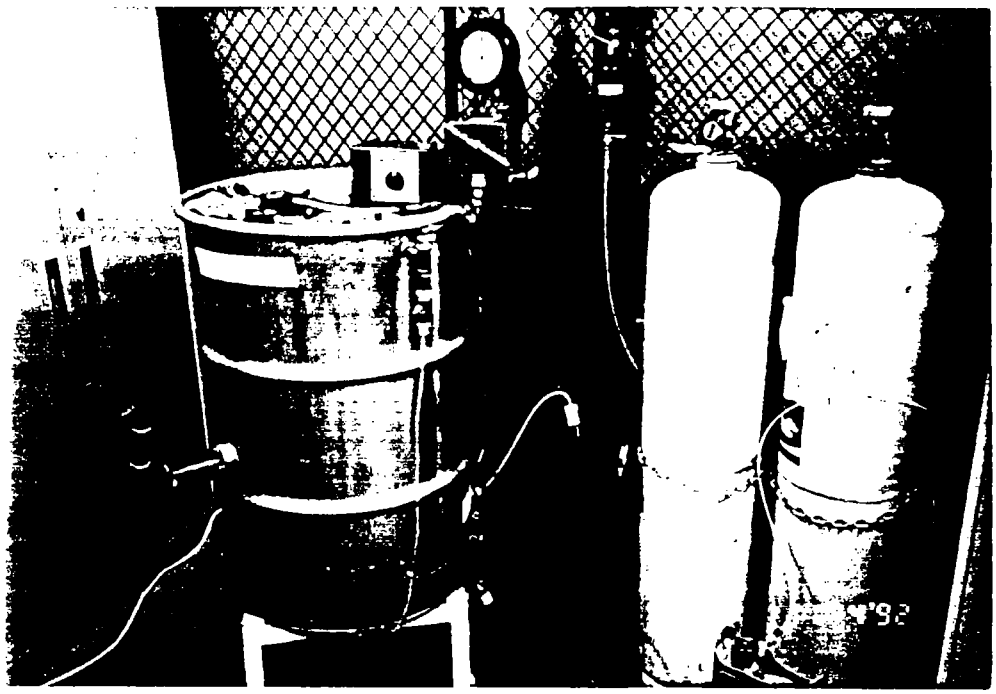
Photograph No. 12 Location: SWMU 11
Orientation: South Date: 11/4/92
Description: This is the Chip Weinger located in the Chip Room. The unit was empty during the VSI.

Photograph No. 13 Location: SWMU 12
Orientation: East Date: 11-4-92
Description: This is the 55-gallon steel drum that collects nickel filter cake (F019) directly from the Nickel Wastewater Treatment System. A dead sump is visible behind the drum.

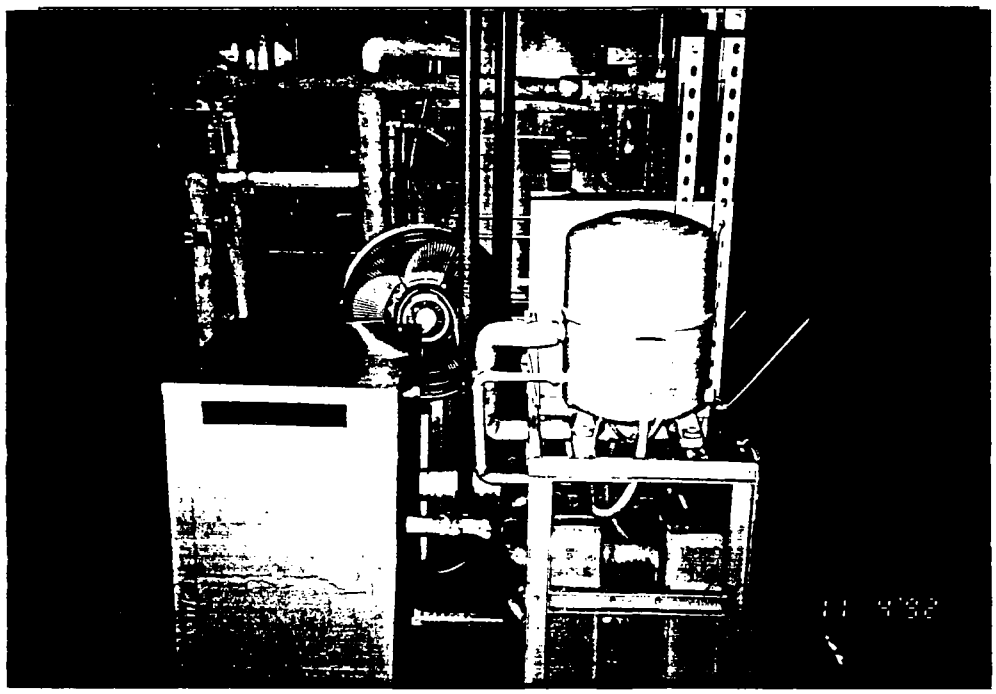


Photograph No. 14 Location: SWMU 13
Orientation: South Date: 11/4/92
Description: The 1-cubic-yard metal hopper that collects chromium filter cake (F019) directly from the Chromium Wastewater Treatment System.

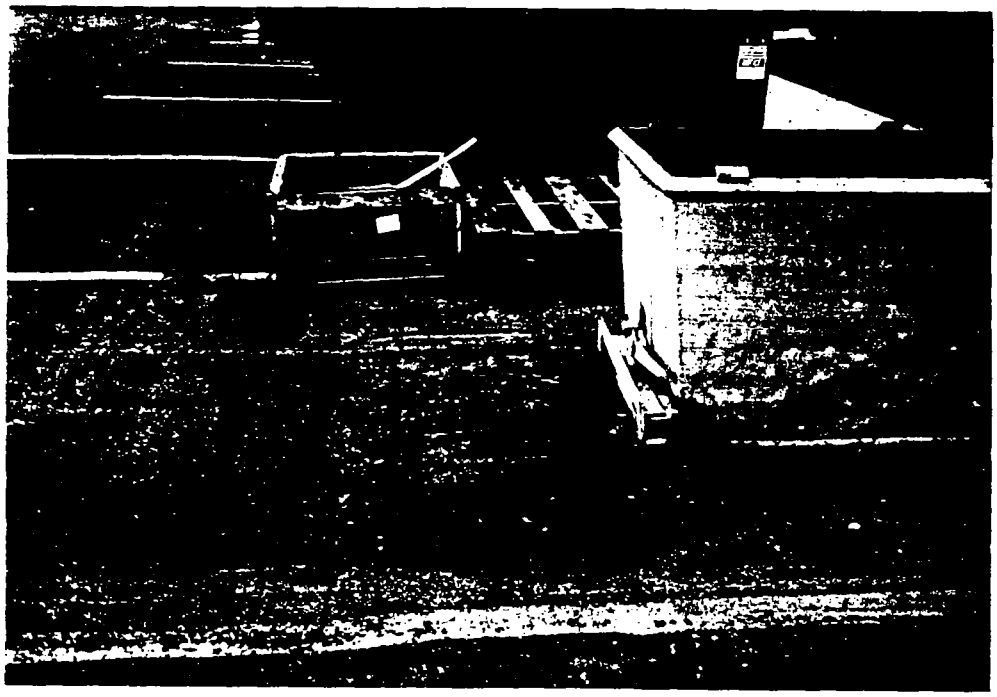
Photograph No. 15 Location: SWMU 14
Orientation: South Date: 11/4/92
Description: The Waste TCA Storage Area. This area is adjacent to a 550-gallon holding reservoir for storage of Waste TCA (F001).



Photograph No. 16 Location: SWMU 15
Orientation: Northwest Date: 11/4/92
Description: This is the R-11 reclaimer located in the northwest corner of the Zexel manufacturing building.



Photograph No. 17 Location: SWMU 16
Orientation: South Date: 11/4/92
Description: This is the Freon Solvent Still located in the Zexel manufacturing building. This is connected to degreasers by a closed-loop system



Photograph No. 18 Location: SWMU 17
Orientation: South Date: 11/4/92
Description: A Nonhazardous Waste Collection Area for scrap metal, located outdoors south of the engineering research and development building. This unit was leaking an oily fluid onto a cracked asphalt pavement.

Photograph No. 19 Location: AOC 1
Orientation: South Date: 11-4-92
Description: The Surface Water Detention Area located south of the Zexel manufacturing building. The surface water is released through a valve at the base of the earthen dike.

Photograph No. 20 Location: AOC 2
Orientation: South Date: 11/4/92
Description: The Tributary to Spring Creek Area is contaminated by PCBs and TCE. The surface water had an oily sheen at the time of the VSI.

Photograph No. 21 Location: AOC 3
Orientation: North Date: 11/4/92
Description: The Rail Spur Area located at the southeast corner of the Zexel manufacturing building is contaminated with TCE.

Photograph No. 22 Location: AOC 4
Orientation: South Date: 11/4/92
Description: The Decatur Building Area contained several ASTs and USTs. This is the probable location of some ASTs north of the building, but the integrity and location of all of the tanks could not be determined.

ATTACHMENT C
VISUAL SITE INSPECTION FIELD NOTES

ZEXEL 9:00 Cool/OVERCAST 50° 12 PEOPLE IN ATTEND.
CITY OF DECATUR
B-W BY BOELTER
ZEXEL
IEPA DUSTIN
RAI -

3 PROD OWNERS ZEX
AERIALS. 30s - MUNITIONS PLANT. MULLER. W. IS
BALL DIAMONDS. 38 IS 1ST AERIAL.

9-20-41, 6-50 - 1 OUT BLDG GONE.
IMHOFF SYSTEM IN 40s. SLUDGE BEDS.
SAND FILTERS & LAGOON TO NORTH.
CONCRETE OUTFALL TO W. WATER TOWER

6/9/1960 N DEVEL. NEW BLDG TO N.
CONCRETE RAMP. NEW BLDG TO SOUTH & OUT TO W.
LAGOON TO W IN MID SITE & LAGOON TO
NW OF OLD BLDG. STILL SAND FILTERS & IMHOFF
OIL CONTAINMENT - 2 IMPOUNDMENTS.
LAGOON TO N SHIFTS SLIGHTLY NW
2 OUTFALLS TO 2 CREEKS.

10/14/83 SAND FILTERS. OIL STORE TANK.
LAGOON NW & OIL IMPOUND. 2 OLD LAGOONS
BARELY VISIBLE. NW COOLING TOWER & GRIM PONDS
TCE TCA AST

CLOSURE OF PCBs. IMHOFF STILL RECEIVING PCB OIL & ICE AT NO 2 OUTFALL.

ZEXEL DOING RI.

LAGOON E OF IMHOFF. PLATING & TANNERING TO DISPOSAL BASIN

90 AERIAL.

49-50 BW BOUGHT FROM MUELLER.

MUELLER COMPANY. BUILT BLDG IN 1930s. ACQUIRED MID-20s.
OP's AS NAVY, VITREOUS/PORCELAIN. PRE WAR.
URINALS, PLUMBING., MUNITIONS & VITREOUS CHINA
OUTBUILD BUILT LATE 50s - DEMOLISHED IN 70s.
CONTROL RODS FOR NUC. REACTOR.

B W control in 1950s. BW HAS AFFIL OR DIVS WITH VARIOUS NAMES.

CITY TOOK OVER IN 93 MFG REG. FALLS - IMHOFF & LAGOON
ZEXEL IN 87 OR 88. DIESEL KIKI - JAPAN.
SPORTS 83-87.

B.W. Recent A-C Compressors
Prior Transmission parts & Carburetors
No process in Excel is same as B.W.

N/E is TV Station. & Vulcan S & G.
Truck Rep. & Auto Store.
City Sludge Lagoon & WWT
W is Retail & Housing. & Priv. Wells. No con
in Mon wells between.
Till unit Aquif & Sand/Gravel.
S is City Disp. Country Club.
E is RR. is Higher. E & Down is Housi
On city water to East
1/4 mi S. not on City. 200'

Flow to unnamed is S & SW.
School John Adams Elem. School 4,000 s?

24-hour Security, Most is Fenced - not all

City - Fenced. Incubator for start up businesses
Mgd & tenants

Excel & 350 persons
City & 100 people as Tenants

City 27, Zex 153 acres.

Built to Supply Ford Auto Transmissions
Machine, heat treat, Assembly
Window A C, compressors, assembly
1954 Zcy AC Compressor
AC Comp in 87. Continue as
compressor plant & new operations.

RESCHEDULE CONTINUATION 9:00a Nov. 4

IMHOFF - SHALLOW H_2O TO SEWER - CLEAN
- DEEP - OIL & PCB.
USED PIPE FROM IMHOFF. WOODEN FLUME SYSTEM DISTRIB
+/- 100'
PCB IN IMHOFF
FILTER & BEDS & METALS
LEVEL STILL RISING IN IMHOFF

COLLECTION BASIN.

2ND OUTFALL. OUTFALL & SLIGHT FLOW. IRON.
TCE IN SAMPLES. FISH IN CREEK.

ODOR ALONG CREEK BETWEEN 1 & 2 OUTFALL
TCE, 1000-1200 V. CHLORINE - 5

2-1	E AT PROBABLE LOCATION OF N-S DRUM PADS.
2	N " * THESE ARE OLD TANK PLATFORMS AND RETENTION AREA
3	N "
4	S AT LAGOON OR TANK FARM - PIRES. E OF DRUM PAD
5	NE " "
6	W POSSIBLE LOCATION OF FORMER LAGOON. W OF DRUM PADS
7	W "
8	SE AT DRAIN (W) OF BOILER PLANT
9	~~E~~ W. AT OLD DRUM PAD
10	" DARK IS LEAF DUST/ASH
11	NW " LEAF P/E
~~12~~	NEWER PAD E-W 6" BERM. Covered. CANT SEE
13	W LEAF PIT FOR BURNING
14	W LEAF PIT FOR
15	W OF PILE EXCAV FROM PIT
16	W of NEWER E-W PAD
17	W OF NEW E-W PAD
18	S AT DRUM PADS
19	WNW ~~AT OUTFALL #3~~ Concrete SLIDE
20	" 3 "
21	PLANT
22	NE BERM & DEPRESSED AREA
23	NE " IS IT NATURAL
24	E. Creek
25	SE outfall 4
	SE "

DRUM PADS NO CITY LEAVE BURNING.
AIR CURTAIN DESTRUCTOR. CITY/PERMITED

N-S PAD Covered E-W PAD Covered.
Destructor

—

CEMENT RAMP - OUTFALL 4 9/20/47

NW V SHARED

3-1 Outfall from LAGOON

2 E Outfall 3

3 E

4 N STORM DISCHARGE RUNOFF

5 N SANITARY

10/29/92

11/4/92 9:00 — Jim Couter - C.H. 35° Sunny 111
Terry Alexander - Boelter Tony Jeff Bob Castle
Jim Hill - G.M. L. Gustafson

REMEDIATION - 3 PHASE INVESTIGATION
① FORMER SETTLING LAGOON
SED & SW. GW
SETTLING LAGOON & HYD
PCBs - TRI
TCE (E) OF BLDG IN SOIL & GW
UNDERLYING S&G AQUIFER
MW 9 UPPER AQUIFER. FLOW NW
UPPER AQ. TILL, BRAID STREA
FLOW N & NE IN E
FLOW TO TRIB IN REST
SHOWS BTEX
REM - FINAL RI. DOING FS.
FS BY 1/93
RISK ASSESS - NO IMMINENT HEALTH THREAT
ALL CONTAM SUBSURF.
NO WORKERS TO AREA
COVERED & ASPHALT
IMHOFF DOUBLE FENCED H2O LEVEL MONITOR
X NO FORMAL IEPA INVOLVEMENT
COPIED ON DATA AND CORRESPONDENCE
TCE AT OUTFALL 2 & AT SE CORNER OF BLDG.
CONTAM FLOW ALONG BRAIDED STREAM
CONTAM CONFINED TO UPPER AQUIF
CLAY LAYER CONFINES.

OLD WWT - 73 PROJ.
Cooling WATER - SEP PROCESS.
SLIM LAGOON - SKIMMER
OIL PITS FOR OIL
V-LAGOON FOR WATER
ALL USTs SOUTH OF PROD. BLDG REMOVE BY B-W
SEE 85155 TANK STORAGE FOLLOWING OIL PIT

OLD CONCRETE SLAB - NO 1960 START DATE. END LETTER
NEWER SLAB (E-W)
FORMER - In SW CORNER INDOOR +/- 80? BLDG INFO
TCE? WASTE - HAZ WASTE
IMHOFF - 44+/- UNTIL 72. TIED TO CITY.
PROCESS + SANITARY
LAGOON - 2 W OF MUELLER. LANDING STRIP + N
+/- > 50 TO 372
2 AS IS NW (E of IMHOFF)
TOOL PLATING?
V-SHAPE 55-60 CLOSED 74/75
DOZED OVER - LEAKED. INFORMAL
OIL SKIMMER SYSTEM SAME DATES
EMULSION LATER.
PCB Retention - 400 Truckloads Closed 74.
TCE + PCB PRE. & POST-
LOOC/16 86 - POSSIBLE 74 - 86/87
POST LAGOON SYSTEM

LOADER - DAMAGE PIPE. 74. HAYBALES.
SUMPS - 4 / INSIDE - CURRENT WWT
84/85 SUMP PIT TO UST.

1.5 YR RENOVATION. ALL NEW EQUIP & FLOOR
GR MGMT FROM JAPAN

FLOOR CLEANED - STORED PRODUCT POST RENOV.
EPOXY FLOOR NOW.
OLD FLOOR NOT EPOXY.
ACID + SHOP. TESTED. CLEAN. ~~RE~~ EPOXY
VISIBLE EQUIP OUTLINE.
SWITCH IN BW FROM TRANSMISSION TO AC.

UST FARM. SEE 85 PHOTOS W/ UST VENTS.
PULLED PRIOR TO ZEXEL. NO CLOSURE INFO.
CLOSED IN 84? 3. WASTE OIL 2. TREAT WASTE OIL

WWT PRE 74 / POST 74 (CLOSE U-LAGOON)
<74 ALL TO OIL SKIMMER → OIL COLLECTION. H2O → U-LAGOON
U LAGOON - NO EQUIP. NAT. AERATION. → TRIB TO SPRING CK. OIL TO ——? CHECK DRAWING
>74 CLOSE. PROCESS → W.O.L SUMP → 3 15K UST → BOILER ROOM TREAT → POLYMER, pH, ALUMATE → OIL TO 2-15K UST. H2O → AERATION POND → DISCH TO DSD POTW.

> 85

OIL TO WHERE? POST 74 → < 87
WHEN USTs PULLED 87 & 88.
GONE BY ZEXEL

OUTFALLS 2 CONTAM. OUTFALL 2
TRIBUTARY PCB IN SEDS. SLUG TO STREAM?
INTERMITTENT
TCE ONLY AT OUTFALL.

VST AREA -

TCE AREA E EDGE SE CORNER. HOT SOIL & GW
25 BORING PPM RANGE. NO SOURCE. SURFACE
PCB Cement - Clean Closed? Get Docs.

CURRENT PRODUCT TCE TANK NEAR RAILROAD.
CONCRETE PAD ON E EDGE.
NO DOC USES. LOADING DOCKS.

1.2 million GAL AST - SAMPLED. CLEAN.
IN 70s. HAS OIL SLUDGE. No 5 grade Fuel Oil.

Release 84/85 CLOSURE DOC. STATE SAMPLED?
Remediation currently in process.

EROSION channel 3 ft below - not named.
channel to Creek

PCB Contamination of Interior Floor.

CURRENT ZEXEL
DEGREASERS TCA, FREON
SEPARATE STILL

PLATING WASTE WT CHROME NICKEL

FREON AST >90 DAY OUTDOOR

CONTAINER STORAGE < 90 DAY.

CHIP DUMPSTER - E SIDE - R & LUBE

SLUDGE DUMPSTER ,

3 SAAs - ACCUM.

NO ASBESTOS.

3 PCBs. FLOOR, CEMENT PADS, LAGOONS.

113

1:00 PHOTO LOG

WALK THRU

①	SE	CORNER MATLS LAB SAA H&NM
2	S	LABEL ON SAA FOR COMPRESSOR FILTER EMPT.
3	S	SAA FOR FREON 11 TO STILL IN ENG
4	S	SAA FOR ~~WASTE~~ USED R-11
5	S	PRODUCT MGMT IN ENG.
6	SE	SAA IN ENG & DRAIN ADJACENT
7	E	SAA ENG
8	E	OVERALL SHOWING SAA & DRAIN - UNKNOWN Connection
9	S	SCRAP Metal DUMPSTER 1 CU YD
10	W	OILS ESCAPING FROM SCRAP DUMPSTER
11	SW	V-SHAPED LAGOON
12	S	U-SHAPED LAGOON
13	E	MW-5 OF WELL MW-5 & PURGE WATER
14	S	PCB Oil Retention Ponds
15	S	PCB Oil Retention Ponds
16	S	CHROME LINE Oil SKIMMER
17		"
18		"
19		"
20	W	CHROME OIL SKIMMER
21	W	AERATION / Cooling H2O POND
22	SW	AERATION
23	SW	"
24	SE	12 M.GAL F HOIL AST
25	S	SURF WATER DET. AREA
26	SE	"

PERFORMED FILE REVIEW & PAPER RESEARCH
DEPLOYED STRAW AT SSIDE DR. & SPRING CK

EVAPORATOR LINE AT S.
2 MODEL LINES INIT
SURFACE TREAT + PLAT AT END
3 STEP ACID TREAT + WASH CHROME PLAT TO TANK TO POTW
COMPRESSOR N LINE
MACHINE - RESIN IMPREG, Ni, TEFLON PLATE
11-14 WATER-BASE, FILTER 111 TCA
COOLANT OILS CHIPS GRIND, CUT
FILTER - OSMOTIC MEMBRANE.

W IS Ni WNT, IMPREG, PLATING.
Ni WNT - DISCH TO POTW
OIL SKIMMER
2 COOLING TOWERS - E SIDE. TO POTW.
NO TREATMENT. NON CONTACT COOLING H_2O

PRESS → OIL, CHIPS & CONVEYOR TO DUMPSTER 10 YD
CHIPS → DUMPSTER → SCRAP
DEGREASE → TCA. INTO FIX. FOR BRAZE
STEEL TCA → HOLD RES → DRUM. STORE DRUMS
OF HAZ & NON HAZ FILTER & OIL
NH MAGNESIUM → DRUM VS SCRAP STEEL FROM FURNACE

Cr SURF TREAT TO WWT. PERMIT REQUIRES FILTER PRESS TO DUMPSTER AT PRESS 30-9
2 LG DUMPSTERS OUT BACK. HAZ & Non HAZ
NonHAZ ADHESIVE & PAINT

MACHINE - CHIPS & COOLANTS.
Coolant H_2O BASED LUBRICANTS
SUMP SUCKER. REMOVE FILTER PUMP TO TRUCK
TO ULTRA FILT. SYSTEM. Remove oil.
Concentrate oils.
WASHERS & RINSE TO ULTRA FILTRATION
DRUM oils. STORED OUT BACK OR CHIP ROOM
CHIPS TO DUMPSTERS. CHIP WRINGER near chip Rm
OILS OFF CHIPS. CHIPS TO RECYC. OIL TO ULTRA.
TCA DEGREASER C STILL DISPOSED AS HAZ WASTE
FILTERS AS HAZ WASTE DRUMS.

TREAT AREA FOR COOP
IMPREG - ORG RESIN - ALL WASTE TO POTW
Reverse Osmosis Purifying - All WASTE TO SANITARY
ULTRA FILTER - Water Wash & Water Coolant
DRUMS - (0.1) OR POTW.
N1 WWT → N1 SLUDGE, STEEL WOOL, POTW

THEN TO TOP(N) LINE 5 Degreasers (2) FREON, (6) TCA
1 Freon PHASING OUT

CLEAN ROOM. O-RING TCE PREP AS SEALANT.
TCE STORED END OF LINE IN DRUM.
ALSO APPLIED TO PART. V. SM. ANT. WASTE.
OIL PURIF SYSTEM ~~ALSO~~ R-11 - Solvent - Degrease test equip
QA LAB — SMALL FILTERS - FREON - SMALL FILTER
~~TEST LAB~~ — GOES TO DRUM TO STILL TO ACCUMULATION

SAAs THROUGHOUT. HW STORE IN CHIP ROOM.
FORMER IN GARAGE & ~~SEE~~ W OF GAR & SLUDGE
Ni & CHROM WWTs, ALSO ULTRAFILTRATION.

3 TCA NO Ni
1 MACH TCA & Ni 1 STILL IN ENG.
2 FREON & STILL TCA & STILL

NH - 2, STORE CURRENT + BARN. & END OF BLDG
GARAGE, CHIP ROOM.

SAA - HAS 2 IN 2 IN ENG LAB
1 QA LAB, 1 AT COMP BEL 1 AT END.
1 BACK AT 3 Deg RESERVOIR Ni SLUDGE AT WWT

SAME PLACES (8) + OIL RAGS / FILTER IN DUMPSTER
FROM SPECIAL WASTE ACCUM.

120

2 Photo Log

2-1 N NE Valve on Retention Dike
2-2 N AT Erosion
2-3 S Erosion.
2-4 NE Detention Pond
2-5 SW SW Corner of Garage (Former HWSA)
2-6 W SW Corner of Garage "
2-7 W Trench outside HWSA
2-8 E TCE Area
2-9 E "
2-10 N "
2-11 E - M well
2-12 SE - Scrap Steel Dumpster
2-13 W - Scrap metal "
2-14 W Close up. Pad & Soil Cuttings in Drum
2-15 S TCE Tank (AST) next to AOC & RCR
2-16 W Closed Tank
2-17 N Dumpster - filter paper - machining
2-18 NW - Sludge Dumpster (F019)
2-19 N Former Zexel Drum Storage - Drains to Sump, No Release to Storm Det
2-20 N - Drum Store, - Some open. 200 drums
2-21 PCBs label PCBs + non HAZ Soil Cutting 6" Concrete cement
2-22 N Soil cutting Drums
2-23 E Sump at Dumpster Store Area
24 S Sump " no Release

PERMITED AIR

PHOTOS
N EMPTY & NON HAZ DRUM STOR
N LABEL NH DRUM
S TCA SAA
S TCA DEBRIS
SE ~~FREON DEBRIS~~ OIL DRY
S ~~500~~ 550 g HOLDING TANK & PUMP TCA
S ~~300~~ 550 g HOLD TANK & PUMP
N DEGREASERS 1 OF 3
W 300-g USED OIL TOTE → TO BULK TANK
S SCRAP HOPPER
S CHIPPER FROM CUTTING — FROM CONVEYOR TO DUMPSTER
E ACID PRE WWT PRIOR to WWT
NW CHROME PW WT 32 GAL/min CAP
W SUMP IN WWT 2 - SUMPS
S FILTER PRESS CAKE
N CHIPPER DR
W HWSA
NW Metal in 12 HAZ 4 NH
W-NH Solvent, N, SLUDGE, OIL/SOLV. RAGS
N SAA
W SAA ≤ 0.1
PAPER FILTER
W WIPES
SE Water-based degreaser
SVEX TRUCK
E TCA STILL

ReDo's

4-1	N	Paper filter
4-2	N	Non Haz & Empty (DRUMS)
4-3	S	Chrome WWT
4-4	S	Filter Cake
4-5	SW	Sump
4-6	S	SAA
4-7	S	TCA Hold
4-8	S	TCA HOLD
9	W	Box filters
10	W	Non Haz
11	W	Haz
12	S	~~Lithium~~
13	N	PCB Floor
14	W	SAA & Used oil
15	W	Paper Filter
16	W	Chipper
17	S	Ultra Filter 4 11 2° 20 g/min
18	N	Reverse Osmosis.
19	N	Rev Osm.
20	E	N1 Filter Press
21	E	Full N1 Sludge Drum
22	S	113 Freon Degreaser & Still SAA
23	N	& Drums SAA + Prod Comp. Eng.
24	WN	R-11 Reclaimer
25	W	SAA

WWT - Chrom Rec, Spills to Sumps
0.1 RAGS clean on Site. H_2O to VLTRX

11/4/92

ZEXEL

February 10, 1992

National Response Center
HQ United States Coast Guard
Washington, D.C.

VIA TELECOPY

Attn: NRC Duty Officer

Gentlemen:

This letter constitutes notice of the discovery of a past release of a hazardous substance pursuant to federal requirements under Section 103(a) and/or 103(c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended. By copy of this letter notice is also provided to the Administrator, Region V, Environmental Protection Agency, the Illinois Emergency Services and Disaster Agency and the Illinois Environmental Protection Agency.

Zexel U.S.A. Corporation owns approximately 103 acres of land located at 625 Southside Drive, Decatur, Macon County, Illinois, which it acquired from Borg-Warner Automotive, Inc. Zexel U.S.A. Corporation leases the property to its subsidiary Zexel Illinois, Inc., which conducts operations at the facility.

In the course of conducting an environmental assessment of the property, twelve surface soil samples and twelve soil boring samples were taken by Geraghty & Miller, Inc., an environmental consultant. Three surface sediment samples taken from a creek bed on the property indicated concentrations of PCB Arochlor-1254 estimated to be as low as 0.28 mg/kg and up to 5.4 mg/kg. Three soil boring samples at other locations indicated concentrations of PCB Arochlor-1254 of 2.7 mg/kg, 4.1 mg/kg, and 28 mg/kg at various depths ranging from 6-8 feet to 10-12 feet. A fourth soil boring indicated a concentration of PCB Arochlor-1254 of 93 mg/kg at a depth of 8-10 feet, and of 6.4 mg/kg at a depth of 14-16 feet. One surface soil sample indicated the presence of benzo(b)fluoranthene at an estimated concentration of 0.26 mg/kg. One soil sample contained a concentration of napthalene of approximately 7.9 mg/kg. Other substances detected were at levels which we believe to be below established or estimated action levels. References in this letter to "other substances" shall mean benzo(b)fluoranthene and napthalene.

Additionally, samples were taken of liquid found in an old waste water treatment facility which indicated concentrations of PCB Arochlor-1254 ranging from 0.1 mg/l to 4.9 mg/l.

ZEXEL ILLINOIS INC.
625 Southside Drive • Decatur, Illinois 62521 • (217) 362-2000 • FAX (217) 423-8722

We have no knowledge of any release of polychlorinated biphenyls or other substances on or to this property since the acquisition of the property by Zexel U.S.A. Corporation in 1987 which could have resulted in these findings. We do not have sufficient information to estimate the time and date of any release or releases which could have resulted in these findings.

We do not have sufficient information to estimate the quantity of polychlorinated biphenyls or other substances which was released and has resulted in these findings.

We do not have sufficient information to identify the source of any release which could have resulted in these findings. We believe that any release originated with a prior owner of the property.

Haynes and Boone, L.L.P., as counsel for Zexel U.S.A. Corporation and Zexel Illinois, Inc. has employed Geraghty & Miller, Inc. to conduct additional investigations to delineate further the nature and extent of this contamination. We will provide all further information to you as it is developed.

Yours truly,

Charlie P. Farley, Jr.
Executive Vice President
ZEXEL Illinois, Inc.

CPF/cyn
2d/5548e

cc: Administrator
Region V
Environmental Protection Agency
Federal Building
230 S. Dearborn St.
Chicago, Illinois 60604

Illinois Emergency Services and Disaster Agency
110 East Adams St.
Springfield, Illinois 62706

Illinois Environmental Protection Agency
Emergency Response Unit
2200 Churchill Rd.
Springfield, Illinois 62706

Illinois Environmental Protection Agency
Region 4
2125 S. First St.
Champaign, Illinois 61820

HAYNES AND BOONE, L.L.P.
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AUSTIN
DALLAS
FORT WORTH
HOUSTON
SAN ANTONIO

WRITER'S DIRECT DIAL NUMBER:

214/651-5593

12078.4

March 3, 1992

VIA FEDERAL EXPRESS

Mr. Charles W. Brutlag
Illinois Environmental Protection Agency
Emergency Response Unit
2200 Churchill Road
Springfield, Illinois 62706

Re: Zexel Illinois, Inc. Facility; Decatur, Illinois

Dear Mr. Brutlag:

By letter dated February 10, 1992, Zexel Illinois, Inc. notified the Administrator of Region 5 of the U.S. Environmental Protection Agency, the Illinois Emergency Services and Disaster Agency, Region 4 of the Illinois Environmental Protection Agency, and your office of the discovery of soils contamination at the Zexel facility located at 625 Southside Drive, Decatur, Macon County, Illinois. That letter describes specific concentrations of PCB Arochlor-1254 which was discovered at various locations on the facility property.

I subsequently met with you on Wednesday, February 19, 1992, at the Zexel facility. Also present at that meeting were representatives of Geraghty & Miller, Inc., an environmental consulting firm with whom Haynes and Boone, L.L.P. has contracted as counsel for Zexel U.S.A. Corporation and Zexel Illinois, Inc. to conduct additional investigations upon the property. At that meeting, we described for you the specific sampling results which were described in Zexel's letter of February 10, 1992, as well as the sampling plan which Geraghty & Miller has implemented to further delineate the nature and extent of the contamination.

At the February 19 meeting, we also described for you a test result from the interior of the Zexel facility building. Zexel had received that result subsequent to Zexel's February 10 letter. As we discussed, that sample was of expansion joint compound from a portion of exposed concrete

flooring in the facility. At the time of our meeting on February 19, Zexel had just learned that that expansion joint compound sample result indicated a concentration of 54 mg/kg of PCB Arochlor-1254. As you know from your tour of the plant facility, the majority of the plant floor was resurfaced by Zexel with a thick epoxy-based floor covering. A few areas of the original concrete flooring were not covered with the new flooring for economic reasons. Following Zexel's discovery of the contamination level of the expansion joint compound, Geraghty & Miller conducted a more extensive sampling of the plant floor areas. Six scraping samples were taken from the exposed concrete floor area adjacent to the original expansion joint compound sample site. One further sample was taken of the expansion joint compound. Additional swipe samples were taken of this exposed concrete flooring area as well as of other exposed concrete flooring areas. Finally, swipe samples were taken from the surface of the epoxy flooring in areas judged likely to have been contaminated by the low traffic flow over the contaminated concrete as well as other areas.

The scrape samples from the concrete flooring around the original joint compound sample indicated concentrations ranging from 7.0 mg/kg to 53 mg/kg of Arochlor-1254. In addition, those samples yielded concentrations of 2.0 mg/kg to 8.2 mg/kg of Arochlor-1260. Other areas of exposed concrete flooring indicated concentration levels ranging from 2.7 ug/100cm^2 to 28 ug/100cm^2 of Arochlor-1254, with some swipes indicating a concentration below the laboratory detection limit. Arochlor-1260 was found in areas of exposed concrete in concentrations ranging from 2.7 ug/100cm^2 to 8.4 ug/100cm^2 with a large number of swipes indicating that no PCBs in excess of the laboratory detection limit were present. Only one test swipe of the epoxy flooring showed any concentrations of PCBs above detection limits. In one area where the epoxy flooring had been cracked, the swipe sample showed a concentration of 9.6 ug/100cm^2 of Arochlor-1254. All areas of exposed concrete flooring for which swipe samples indicated contamination by PCBs have been isolated and are being covered as a safeguard while Geraghty & Miller prepares a further sampling and analysis plan for the areas below the exposed concrete floor areas.

Zexel has also received results from air sampling conducted by Geraghty & Miller in the vicinity of the contaminated, exposed concrete flooring. The air test did not detect PCBs.

Table 1. Summary of Subsurface Soil Samples

Boring ID#	*Sampled Interval (feet below grade)*	*G&M Sampling ID#*	*Laboratory Sampling ID#*
GMSB-01	6-8	GMSB-01-0608	A242791
	10-12	GMSB-01-1012	A242792
	12-14	GMSB-01-1214	A242793
GMSB-02	4-6	GMSB-02-0406	A242786
	8-10	GMSB-02-0810	A242787
GMSB-03	10-12	GMSB-03-1012	A242788
	12-14	GMSB-03-1214	A242789
	10-12	GMSB-03D-1012	A242790
GMSB-04	4-6	GMSB-04-0406	A242715
	10-12	GMSB-04-1012	A242716
GMSB-05	6-8	GMSB-05-0608	A242717
	12-14	GMSB-05-1214	A242718
GMSB-06	8-10	GMSB-06-0810	A242719
	14-16	GMSB-06-1416	A242720
GMSB-07	6-8	GMSB-07-0608	A242721
	16-18	GMSB-07-1618	A242722
GMSB-08	8-10	GMSB-08-0810	A242936
	8-10	GMSB-08-0810D	A242937
	12-14	GMSB-08-1214	A242938
	18-20	GMSB-08-1820	A242939
GMSB-09	4-6	GMSB-09-0406	A242940
	10-12	GMSB-09-1012	A242941
GMSB-10	2-4	GMSB-10-0204	A242942
	18-20	GMSB-10-1820	A242943
GMSB-11	8-10	GMSB-11-0810	A242944
	12-14	GMSB-11-1214	A242945
GMSB-12	4-6	GMSB-12-0406	A242946

Table 2. Summary of IEPA Retention Area Surface Soil Analytical Data

Compound	Sample #1	Sample #2	Sample #3	Sample #4	Sample #5	Sample #6
Volatile Organics (ug/kg)						
Acetone	12	91	6J	6J		40
Methylene chloride	10	21	16	16	12	22
Toluene	13	93	99	150	25	180
Xylenes, total						91
Semivolatiles (ug/kg)						
Acenaphthene						510
Bis(2-ethylhexyl)phthalate	190J	350				
Dibenzofuran						420
Fluoranthene	220J				310J	310J
Fluorene						940
2-Methylnaphthalene						1,200
Phenanthrene		210J				2,400
Pyrene					210J	320J
Metals (mg/l)						
Silver, TCLP	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Arsenic, TCLP	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium, TCLP	1.1	1.0	1.3	1.2	1.1	1.1
Cadmium, TCLP	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Chromium, TCLP	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Mercury, TCLP	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Lead, TCLP	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Selenium, TCLP	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Notes:

1. A concentration with a "J" qualifier indicates that the reported quantity is an estimated value.
2. TCLP indicates that the analysis was performed using the Toxicity Characteristic Leachate Procedure.

Table 1. Summary of Subsurface Soil Analytical Data

Compound	*GMSB-01-0608 A242791*	*GMSB-01-1012 A242792*	*GMSB-01-1214 A242793*	*GMSB-02-0406 A242786*	*GMSB-02-0810 A242787*	*GMSB-03-1012 A242788*	*GMSB-03-1214 A242789*	*GMSB-03D-1012 A242790*
Volatile Organics (ug/kg)								
Methylene chloride						0.79		0.99
Toluene						1.4		1.8
Xylenes, total				0.37J				
Semivolatiles (ug/kg)								
Bis(2-ethylhexyl)phthalate	3,800		1,400	2,800	1,800	2,800	410	1,000
Naphthalene						210J		
Metals (mg/kg)								
Aluminum	8,200	9,400	6,100	13,000	7,800	6,900	4,600	8,200
Barium	63	140	31	88	30	89	69	87
Cadmium				0.63				
Calcium	31,000	5,200	52,000	3,800	45,000	6,600	2,900	4,200
Chromium	14	12	11	14	13	9.9	8.2	12
Cobalt	8.4	12	7.0	9.0	7.4	6.2	6.7	8.6
Copper	8.8	6.2	9.0	25	7.2	8.9	4.7	10
Iron	17,000	18,000	17,000	22,000	16,000	12,000	11,000	14,000
Lead	14	15	9.0	14	8.0	11	12	13
Magnesium	21,000	3,000	24,000	4,100	24,000	4,600	2,800	3,500
Manganese	990	1,700	380	250	330	500	190	540
Nickel	19	14	16	14	18	12	12	14
Potassium	1,300	900	960	810	1,500	700	460	880
Sodium	300	59	410	88	160	71	48	83
Vanadium	16	25	14	30	14	16	16	19
Zinc	45	53	44	61	46	36	33	42
Arsenic	5.5	6.2	7.3		2.9	2.2	2.5	3.1

Notes:

1 All concentrations are reported as the dry weight corrected result.

J A concentration with a "J" qualifier indicates that the reported quantity is an estimated value.

Table 3. Summary of Subsurface Soil Analytical Data

Compound	GMSB-04-0406 A242715	GMSB-04-1012 A242716	GMSB-05-0608 A242717	GMSB-05-1214 A242718	GMSB-06-0810 A242719	GMSB-06-1416 A242720	GMSB-07-0608 A242721	GMSB-07-1618 A242722
Volatile Organics (mg/kg)								
Ethylbenzene					7.0		0.46	
Methylene Chloride							0.68	
Toluene		0.32J	0.65				1.2	0.33J
Xylenes, total		0.36J			13		1.4	
Semivolatiles (ug/kg)								
Bis(2-ethylhexyl)phthalate	580	17,000	1,800	440	12,000	3,900	8,700	1,300
2-Methylnaphthalene		3,700			1,100			
Naphthalene		7,900			1,100		550J	
Phenanthrene					1,800		640J	
PCBs/Pesticides (mg/kg)								
Arochlor-1254		2.7			93	6.4	28	
Metals (mg/kg)								
Aluminum	7,900	6,300	7,000	5,300	10,000	4,800	10,000	5,700
Barium	63	78	49	22	72	120	96	17
Cadmium				0.64	0.96			
Calcium	39,000	6,700	28,000	33,000	18,000	3,900	13,000	43,000
Chromium	15	7.9	13	10	53	21	180	12
Cobalt	7.6	7.4	7.0	7.0	9.7	9.6	5.6	5.7
Copper	11	6.9	11	7.8	32	12	130	7.1
Iron	15,000	11,000	14,000	17,000	23,000	14,000	26,000	12,000
Lead	7.0	6.7		8.3	14	18	17	10
Magnesium	11,000	2,600	18,000	22,000	13,000	2,800	5,100	29,000
Manganese	390	820	380	330	1,000	720	260	280
Nickel	16	11	13	22	38	20	200	20
Potassium	790	690	960	880	1,100	490	540	1,200
Sodium	120	63	65	62	180	120	100	68
Vanadium	18	18	15	13	24	20	20	10
Zinc	43	32	41	37	100	64	45	44

Notes:

1 All concentrations are reported as the dry weight corrected result.

2 A concentration with a "J" symbol indicates that the reported quantity is an estimated value.

ZACTTBOL 71 SXTOL SPTIIL WKIMPA

Table 1. Summary of Subsurface Soil Analytical Data

Compound	*GMSB-08-0810 A242936*	*GMSB-08-0810D A242937*	*GMSB-08-1214 A242938*	*GMSB-08-1820 A242939*	*GMSB-09-0406 A242940*	*GMSB-09-1012 A242941*	*GMSB-10-0204 A242942*	*GMSB-10-1820 A242943*
Volatile Organics (mg/kg)								
Xylenes, total						1.1		
Semivolatiles (ug/kg)								
Bis(2-ethylhexyl)phthalate	1,100	2,100	960	390J	2,200	8,500		890
Phenanthrene					500J	1,300		
PCBs/Pesticides (mg/kg)								
Aroclor-1254						4.1		
Metals (mg/kg)								
Aluminum	9,600	6,400	6,600	8,100	11,000	6,300	5,200	6,200
Barium	41	36	26	35	160	50	20	30
Calcium	75,000	42,000	83,000	58,000	4,900	9,300	52,000	70,000
Chromium	16	10	27	15	15	10	9.7	11
Cobalt	7.4	6.7	6.7	6.5	7.9	5.4	5.9	6.0
Copper	9.8	8.8	9.1	8.9	9.0	6.2	8.8	7.6
Iron	17,000	14,000	13,000	15,000	16,000	11,000	12,000	12,000
Lead	11	7.4	23	6.7	12	8.6	5.5	
Magnesium	25,000	22,000	33,000	36,000	2,900	5,000	23,000	28,000
Manganese	480	280	390	350	510	320	340	320
Nickel	21	14	30	17	15	12	13	15
Potassium	1,700	780	1,200	1,700	800	760	1,000	1,200
Sodium	130	77	110	120	59	68	99	110
Vanadium	17	14	13	15	20	13	11	12
Zinc	48	40	36	35	48	33	34	30
Arsenic	4.5	4.9	3.4	3.8	1.8	3.2	3.8	3.0

Notes:

1. All concentrations are reported as the dry weight corrected result.
2. A concentration with a "J" qualifier indicates that the reported quantity is an estimated value.

Table 3. *Summary of Subsurface Soil Analytical Data*

Compound	GMSB-11-0810 A242944	GMSB-11-1012 A242945	GMSB-12-0406 A242946
Volatile Organics (mg/kg)			
Methylene chloride			
Toluene			
Xylenes, total			
Semivolatiles (ug/kg)			
Bis(2-ethylhexyl)phthalate	910J	1,200	
Pyrene	840J		
Metals (mg/kg)			
Aluminum	8,500	5,000	6,700
Barium	51	50	34
Cadmium			
Calcium	26,000	4,900	640
Chromium	12	7.2	8.1
Cobalt	6.8	5.3	4.6
Copper	11	7.3	6.3
Iron	16,000	9,800	12,000
Lead	15	8.9	8.0
Magnesium	15,000	4,200	2,100
Manganese	340	250	260
Nickel	16	9.8	9.2
Potassium	1,100	440	440
Sodium	63	36	26
Vanadium	16	13	13
Zinc	44	28	33
Arsenic	4.8	4.0	5.4

Notes:

1 All concentrations are reported as the dry weight corrected result.

2 A concentration with a "J" qualifier indicates that the reported quantity is an estimated value.

Table 4. Summary of Surface Soil Analytical Data

Compound	*GMSS-01 A242701*	*GMSS-02 A242702*	*GMSS-03 A242704*	*GMSS-04 A242705*	*GMSS-05 A242706*	*GMSS-06 A242707*
Volatile Organics (ug/kg)						
Methyl Ethyl Ketone	0.90B				1.4B	1.4B
Toluene	0.50					
Semivolatiles (ug/kg)						
Bis(2-ethylhexyl)phthalate						270J
PCBs/Pesticides (mg/kg)						
Arochlor-1254				2.0	0.28J	5.4
Metals (mg/kg)						
Aluminum	7,200	9,500	9,500	3,700	5,600	8,000
Barium	78	64	100	87	89	100
Cadmium						1.2
Calcium	4,800	10,000	9,500	2,100	4,600	12,000
Chromium	8.3	12	17	12	10	26
Cobalt	6.4	7.7	6.8	7.9	6.6	6.9
Copper	10	13	7.2	4.3	8.6	24
Iron	10,000	14,000	19,000	10,000	14,000	16,000
Lead	16	16	15	14	16	23
Magnesium	2,700	6,700	7,300	1,800	3,200	7,800
Manganese	600	490	290	400	620	930
Nickel	11	15	15	12	14	23
Potassium	860	1,200	860	430	750	890
Sodium	35	52	92	30	28	82
Vanadium	12	16	19	17	16	18
Zinc	61	55	47	39	64	100
Arsenic	3.1	4.9	4.4	7.7		7.6

Notes:

1 All concentrations are reported as the dry weight corrected result.

2 A concentration with a "B" qualifier indicates that the compound was also detected in the blank.

3 A concentration with a "J" qualifier indicates that the reported quantity is an estimated value.

Table 4. *Summary of Surface Soil Analytical Data*

Compound	GMSS-07 A242708	GMSS-08 A242709	GMSS-08D A242710	GMSS-09 A242711	GMSS-10 A242712
Volatile Organics (mg/kg)					
Chloromethane	0.61J				
Methylene chloride	0.53				
Methyl Ethyl Ketone					
Toluene	1.5		0.90	0.51	
Xylenes, total					
Semivolatiles (ug/kg)					
Benzo(b)fluoranthene					260J
Bis(2-ethylhexyl)phthalate					300J
Fluoranthene					280J
Metals (mg/kg)					
Aluminum	9,800	8,400	7,800	8,400	12,000
Barium	44	32	34	30	78
Calcium	50,000	56,000	58,000	64,000	2,800
Chromium	18	12	11	12	16
Cobalt	6.0	6.5	6.3	6.6	9.5
Copper	9.0	6.8	7.2	7.2	15
Iron	16,000	14,000	13,000	15,000	21,000
Lead	11	7.3	7.6	7.8	15
Magnesium	20,000	26,000	28,000	31,000	12,000
Manganese	390	360	350	340	480
Nickel	16	15	15	15	25
Potassium	1,500	1,400	990	1,200	1,500
Sodium	64	74	70	86	71
Vanadium	16	12	12	14	29
Zinc	47	44	53	45	62
Arsenic	4.5	4.4	4.6	3.8	

Notes:

1 All concentrations are reported as the dry weight corrected result.

2 A concentration with a "B" qualifier indicates that the compound was also detected in the blank.

3 A concentration with a "J" qualifier indicates that the reported quantity is an estimated value.

Table 5. Cooling Pond Sludge Analytical Data

Compound	Detection Limit	GMCP-01	GMCP-03
TCLP Volatile Organics (ug/l)			
Benzene	50	BDL	BDL
Carbon tetrachloride	50	BDL	BDL
Chlorobenzene	50	BDL	BDL
Chloroform	50	BDL	BDL
1,2-Dichloroethane	50	BDL	BDL
1,1-Dichloroethylene	50	BDL	BDL
Methyl ethyl ketone	100	BDL	BDL
Tetrachloroethylene	50	BDL	BDL
Trichloroethylene	50	BDL	BDL
Vinyl chloride	100	BDL	BDL
TCLP Semivolatiles (ug/l)			
1,4-Dichlorobenzene	50	BDL	BDL
2,4-Dinitrotoluene	50	BDL	BDL
Hexachlorobenzene	50	BDL	BDL
Hexachlorobutadine	50	BDL	BDL
Hexachloroethane	50	BDL	BDL
Nitrobenzene	50	BDL	BDL
Pyridine	250	BDL	BDL
2-Methylphenol	50	BDL	BDL
3-Methylphenol	50	BDL	BDL
4-Methylphenol	50	BDL	BDL
Pentachlorophenol	250	BDL	BDL
2,4,5-Trichorophenol	50	BDL	BDL
2,4,6-Trichorophenol	50	BDL	BDL
Inorganics (mg/l)			
Barium	0.20	2.2	2.2
Cadmium	0.02	BDL	BDL
Chromium	0.05	0.06	0.11
Lead	0.20	BDL	BDL
Silver	0.04	BDL	BDL
Arsenic	0.005	BDL	BDL
Selenium	0.005	BDL	BDL
Mercury	0.002	BDL	0.0029

Notes:

1. All detection limits and concentration level are reported as indicated; organics in micrograms per liter (ug/l) and inorganics in milligrams per liter (mg/l).
2. The cooling pond sludge samples were analyzed using the Toxicity Characteristic Leaching Procedure.

Table 1. Summary of Additional Surface Soil Analytical Data

Compound	*GMSS-19 C136076*	*GMSS-20 C136129*	*GMSS-21 C136130*	*GMSS-22 C136131*	*GMSS-23 C136132*	*GMSS-24 C136133*
Volatile Organics (mg/kg)						
Acetone						0.035
1,2-Dichloroethene				0.570		
Trichloroethene				0.018		
Semivolatile Organics (ug/kg)						
Benzylbutylphthalate	300J	360				
Bis(2-ethylhexyl)phthalate	310J	530		200J		
Di-n-butylphthalate	670	430	230J	550	340	360
Flouranthene						
Pyrene						
PCBs (mg/kg)						
Arochlor 1016	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1221	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1232	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1242	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1248	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1254	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1262	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. All data that is shown in this summary table is preliminary.
2. A "J" qualifier indicates that the concentration is an estimated quantity.
3. "BDL" indicates that the constituent is below the laboratory detection limit.

Table 1. Summary of Additional Surface Soil Analytical Data

Compound	GMSS-13 A246182	GMSS-14 A246183	GMSS-15 A246184	GMSS-16 C136073	GMSS-17 C136074	GMSS-18 C136075
Volatile Organics (mg/kg)						
Acetone				0.027	0.051	0.029
1,2-Dichloroethene						
Trichloroethene						
Semivolatile Organics (ug/kg)						
Benzylbutylphthalate					210J	260J
Bis(2-ethylhexyl)phthalate						220J
Di-n-butylphthalate					990	760
Fluoranthene		440		210J		
Pyrene		350J		210J		
PCBs (mg/kg)						
Arochlor 1016	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1221	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1232	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1242	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1248	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1254	BDL	0.32	BDL	BDL	BDL	BDL
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1262	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. All data that is shown in this summary table is preliminary.
2. A "J" qualifier indicates that the concentration is an estimated quantity.
3. "BDL" indicates that the constituent is below the laboratory detection limit.

Table 1. Summary of Additional Surface Soil Analytical Data

Compound	*GMSS-25 C136134*	*GMSS-26 C136136*
Volatile Organics (mg/kg)		
Acetone		0.055
1,2-Dichloroethene		
Trichloroethene		
Semivolatile Organics (ug/kg)		
Benzylbutylphthalate		
Bis(2-ethylhexyl)phthalate		
Di-n-butylphthalate	180J	220J
Fluoranthene		
Pyrene		
PCBs (mg/kg)		
Arochlor 1016	BDL	BDL
Arochlor 1221	BDL	BDL
Arochlor 1232	BDL	BDL
Arochlor 1242	BDL	BDL
Arochlor 1248	BDL	BDL
Arochlor 1254	BDL	BDL
Arochlor 1260	BDL	BDL
Arochlor 1262	BDL	BDL

Notes:

1. All data that is shown in this summary table is preliminary.
2. A "J" qualifier indicates that the concentration is an estimated quantity.
3. "BDL" indicates that the constituent is below the laboratory detection limit.

The Zexel facility is located in an area used for industrial, commercial, and residential purposes in the southern part of the City of Decatur. Zexel is immediately bounded by Southside Drive to the north, the former Borg Warner facility currently owned by the City of Decatur to the south, an undeveloped parcel of land to the west, and the Illinois Central Gulf Railroad right-of-way to the east.

Spring Creek and its tributaries are located along the southwestern and western borders of the Zexel property. Surface water runoff from the area in the rear of the manufacturing facility drains into this creek. Spring Creek flows north-northwesterly and enters the Sangamon River approximately 1/2 to 3/4 mile northwest of the Zexel facility.

THE IMHOFF TANK

An antiquated wastewater treatment system exists in the woods in the back portion of the property Zexel bought in 1988. This wastewater treatment system is near the boundary between the Zexel property and the City of Decatur property to the south. It consists of an Imhoff tank with intake lines coming from the property owned by the City of Decatur and discharge lines running from the Imhoff tank to a tributary of Spring Creek running through the Zexel property. The Imhoff system consists of two primary chambers that were used for sewage disposal. One chamber was the Imhoff tank itself, with a bottom approximately twenty-five feet below land surface. The other chamber was a dosing tank, with a bottom approximately six feet below the land surface. The Imhoff tank was open to the atmosphere and contained an unknown quantity of oil, water, and solids.

Geraghty & Miller conducted an analysis of the material in the Imhoff tank and found the presence of diesel fuel and waste oil. Further analysis of the waste oil indicated possible contamination with arochlor-1254, a PCB. See Exhibits A and B (sample results from Imhoff tank).

Because the Imhoff system was open to the elements and was full with waste oil and water, Zexel requested through its consulting engineering firm, Geraghty & Miller, permission from the Macon County Sanitary District to discharge the water in the Imhoff system into the sanitary sewer system in order to lower levels below the top of the tank. Such permission was granted

and Geraghty & Miller began discharging the water from the Imhoff system while leaving the waste oil in place for later disposal.

Next, Geraghty & Miller determined that all waste oil, sludge, and remaining water would have to be removed by a qualified subcontractor and transported for proper disposal. Geraghty & Miller is in the process of preparing a remediation plan in order to solicit bids by subcontractors. On March 21, 1992, Zexel applied for a hazardous waste generator permit and U.S. EPA identification number. On April 15th, Region 5 of U.S. EPA assigned Zexel identification number IL0984862383.

Upon selecting a subcontractor, Geraghty & Miller will contract for the complete removal of waste oil, sludges and water from the Imhoff tank. Upon removal of these materials, the Imhoff tank will be cleaned and secured.

INTERIOR FLOOR OF ZEXEL MANUFACTURING FACILITY

During the course of its overall assessment of the Zexel site, Geraghty & Miller conducted tests to determine if any contamination existed inside the Zexel facility. During the course of several weeks, Geraghty & Miller tested the concrete floor in the Zexel manufacturing facility, tested the air in the facility, and conducted borings beneath the floor of the facility in order to test the underlying soil. As a result of wipe tests, it was found that a certain portion of the old concrete floor of the Zexel manufacturing facility contained small amounts of PCB contamination. See Exhibit C (sample results from old concrete floor). Generally, this area of contamination consisted of old concrete flooring used by Zexel as a storage area. All other floor areas of the Zexel facility had been sandblasted and sealed with a layer of epoxy after Zexel bought the facility in 1987. This area of "new floor" was found not to be contaminated.

Upon learning of the contamination on the old floor, Zexel immediately secured and covered the floor where contamination was found. All material stored on the portion of the floor where contamination was found was removed and access to the floor was restricted. Geraghty & Miller took core samples of the concrete floor to determine the extent of contamination and made soil borings beneath the floor.

Testing of the air inside the manufacturing facility and testing of the soil beneath the old concrete floor revealed no PCB contamination. Geraghty & Miller and Zexel have concluded that the source of the PCB contamination on the old concrete floor is oil used in the manufacturing process by the prior owner, Borg Warner. Apparently, the PCB-containing oil had soaked into the top layer of concrete flooring in this section of the plant.

Geraghty & Miller is currently drafting a remedial action plan to scour the old concrete floor with a solvent-based wash, conduct additional testing to ensure that all contamination has been removed, and seal the floor with two layers of epoxy.

FORMER SETTLING BASIN

Geraghty & Miller has been conducting numerous soil and groundwater tests in an area on the Zexel property to the southeast of the Zexel Manufacturing Plant. This is an area which appears to have been used in the past as a settling basin by the previous owner, Borg Warner. Laboratory analysis of soil and water samples have shown that the area contains subsurface contamination, including contamination by PCBs. See Exhibit D (sample results of former settling basin and surrounding areas, including most recent results of metals testing from sludge drying basin). Geraghty & Miller is currently using the subsurface test results to prepare a remedial action plan for this portion of the Zexel property. Testing has recently been concluded and not all sample results are in. We estimate that Geraghty & Miller will not have an initial remedial action plan for several more weeks.

SPRING CREEK TRIBUTARY AREA

Geraghty & Miller has also conducted sampling tests of the small tributary of Spring Creek that runs through the Zexel property, including sampling Spring Creek from the Zexel property to a point close to the Sangamon River. Results of these tests are attached as Exhibits B, E, and F.

In short, low levels of contamination have been discovered in the surface water in the Spring Creek tributary on Zexel's property. However, no contamination was discovered beyond the Zexel property.

One area of concern is a discharge pipe leading into the Spring Creek tributary from the property to the south owned by the City of Decatur. Apparently, the prior owner or owners of the property had installed a wastewater treatment system, a discharge system and a french drain system on the property. Part of those systems is now on city property and part is on Zexel property. While the full extent of the systems on the city's property is unknown to Zexel and Geraghty & Miller at this time, at least four points from the wastewater or drainage system on the city's property discharge onto Zexel's property. Some of these discharge points have been discussed earlier in connection with the Imhoff wastewater treatment system. Recently, Geraghty & Miller tested the water coming from the four discharge points and tested the surface soil in the Spring Creek tributary area in the vicinity of those discharge points. The second discharge point (moving from east to west) contained the following volatile organic chemicals: trichloroethene (2400 ug/L), vinyl chloride (280 ug/L), and 1,2-dichloroethene (6000 ug/L). See Exhibit E (sample results from Spring Creek tributary area).

At the present time, Zexel and Geraghty & Miller do not know the precise source of this contamination. However, all indications are that the contamination is coming from or through the city-owned property to the south of the Zexel property. On several occasions in the past several weeks, representatives of Zexel have contacted the City of Decatur and insisted that the city take whatever action is necessary to stop the flow of contaminants from the city property onto Zexel's property.

It is the understanding of Zexel that the city is presently investigating its own property to determine whether or not it is the source of the contamination being discharged into the Spring Creek tributary through the second discharge point. While Zexel believes the city is currently engaged in some site activity, the full extent of that activity, its purpose, and its results are not now known to Zexel. At the present time, the discharge of contaminated water onto the Zexel property appears to be continuing.

GROUND WATER

As part of its continuing investigation, Geraghty & Miller has installed thirteen monitoring wells on the Zexel property. Zexel is currently awaiting results of samples taken from the monitor wells.

CONCLUSION

Zexel and Geraghty & Miller are actively and diligently pursuing a complete investigation of the Zexel plant and property and are currently in the process of preparing a remedial action plan in response to the recently found contamination. Zexel will provide IEPA with all laboratory sample results when they are completed and available. Zexel stands ready to respond to any inquires IEPA may have and will make its environmental consultants and attorneys available for consultation whenever necessary. The health and safety of the public and the environment has been an issue of utmost concern to Zexel since it discovered contamination on its property. Zexel believes that its activities to date in response to the discovery of contamination have been responsive and productive, and that Zexel, in combination with its engineering consultant, Geraghty & Miller, is responding to the discovery of contamination in a prudent and responsible manner.

Any questions IEPA may have of Zexel should be directed to Robert Caston, General Counsel at Zexel U.S.A. Corporation, 4395 Diplomacy Road, Fort Worth, Texas 76155, telephone (817) 354-7990 or to Laurence K. Gustafson at Haynes and Boone, L.L.P., 3100 NationsBank Plaza, Dallas, Texas 75202-3714, telephone (214) 651-5635.

Sincerely yours,

Laurence K. Gustafson

LKG/tw
6812c

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12078.2

May 14, 1992

Mr. Scott Owen
Illinois Environmental Protection Agency
Emergency Response Unit
2200 Churchill Road
Springfield, Illinois 62706

Re: Zexel U.S.A. Corporation Site; 625 Southside Drive, Decatur, Illinois

Dear Mr. Owen:

On Monday, May 11, 1992, I toured the Zexel U.S.A. Corporation ("Zexel") facility in Decatur, Illinois, in company with you, representatives of the City of Decatur and representatives of Zexel. After we visited all the areas of concern on the Zexel property I told you that I would send you copies of our laboratory results from the sampling conducted by Zexel's environmental engineering firm, Geraghty & Miller, Inc. This letter provides information about the status of various investigative and remedial activities at the Zexel site at 625 Southside Drive, Decatur, Illinois, since the discovery by Zexel of contamination on that site. The contamination consists of PCBs and solvents that apparently existed on the property prior to Zexel's purchase of the site from Borg Warner Automotive, Inc., ("Borg Warner") in 1987.

During 1991, Zexel became suspicious of possible contamination on its property and, through its counsel, Haynes and Boone, L.L.P., retained the environmental engineering firm of Geraghty & Miller to conduct a site investigation. After Geraghty & Miller discovered PCB contamination on the property, Zexel notified the National Response Center on February 10, 1992. At the present time, Geraghty & Miller is in the process of completing its site investigation and is preparing remedial action plans.

This letter provides information about the status of five specific areas of concern on the Zexel property: (1) the Imhoff tank located to the south of the Zexel Manufacturing Facility, (2) the interior concrete floor of the Zexel Manufacturing Facility, (3) the pre-existing settling basin located on the Zexel property, (4) discharges onto the Zexel property apparently coming from property owned by others, and (5) ground water in the immediate vicinity.

BACKGROUND

On February 10, 1992, Zexel provided notice to the National Response Center about possible PCB contamination on the Zexel property. At the same time, Zexel provided an identical notice to the Illinois Environmental Protection Agency ("IEPA"). On February 11, 1992, counsel for Zexel spoke with you about the discovery of a past release of hazardous substances on the property now owned by Zexel. On February 19, 1992, representatives of IEPA visited the Zexel plant site and met with Zexel personnel and representatives of Geraghty & Miller. At that time, Zexel's counsel and engineering firm gave IEPA a briefing about their findings and Zexel's immediate plans to control, investigate and remediate the problem. Since that time, substantial progress has been made in identifying the extent of contamination and in preparing a remedial response.

The original owner/operator of the facility, Borg Warner, constructed the building that houses Zexel's current operations in the early 1950's Borg Warner purchased another facility during the early 1950's immediately south of the current Zexel manufacturing facility. This facility is currently owned by the City of Decatur. Borg Warner constructed a second facility in the mid 1970s immediately to the west of the current Zexel manufacturing facility. This facility currently houses Zexel's engineering and research and development departments.

Zexel owns approximately 100 acres of the former Borg Warner property. The Zexel manufacturing facility is approximately 430,000 square feet. Important features of the Zexel property include above ground storage tanks, a cooling water pond, an oil/water skimmer, former oil collection basins, a former settling basin, and previously-used underground storage tanks.

Geraghty & Miller continues the soil and groundwater investigations which we discussed with you at the meeting of February 19, 1992. Geraghty & Miller is also devising an additional sampling plan with respect to the contaminated, exposed concrete flooring areas within the facility. We will keep you advised of the sampling results received from the continuing soils investigation. We will also advise you concerning the Geraghty & Miller proposal for further investigation of the concrete flooring contamination within the plant.

If you have any questions regarding the foregoing, please do not hesitate to call me at (214) 651-5593 or Larry Gustafson of this office at (214) 651-5635.

Yours truly,

Steven L. Wilson

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1d/6202e

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Champagne, Illinois 61820

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EXHIBIT A

Gas chromatography analysis of one product sample (GMTANK 31692)

Prepared for

Geraghty & Miller, Inc.
75 E. Walker Drive, 11th Floor
Chicago, IL 60601

March 1992

Prepared by

Global Geochemistry Corporation
6919 Eton Ave.
Canoga Park, California 91303-2194
U.S.A.

gyraph.drw

MEMORANDUM

One product sample (GMTANK 31692) was received from Geraghty & Miller, Inc. on March 18, 1992 for hydrocarbon characterization using capillary gas chromatography, and given the work order #7484.

The distribution of identifiable alkanes in the product sample was measured by injecting a small aliquot of the product onto a gas chromatograph equipped with FID and a capillary column. The results of this analysis is presented in Figure 1 as an alkane gas chromatogram. The gas chromatogram shows that the product sample consists of a mixture of slight-moderately altered (by waterwashing and biodegradation) diesel fuel and severely biodegraded heavy refined product. The presence of normal alkanes in the C_{12} to C_{21} range confirms the relative freshness of diesel fuel fraction in this sample, whereas the unresolved naphthenic (cyclic alkanes) hump above C_{21} is indicative of the presence of severely biodegraded heavy refined product (probably waste oil).

Figure 1

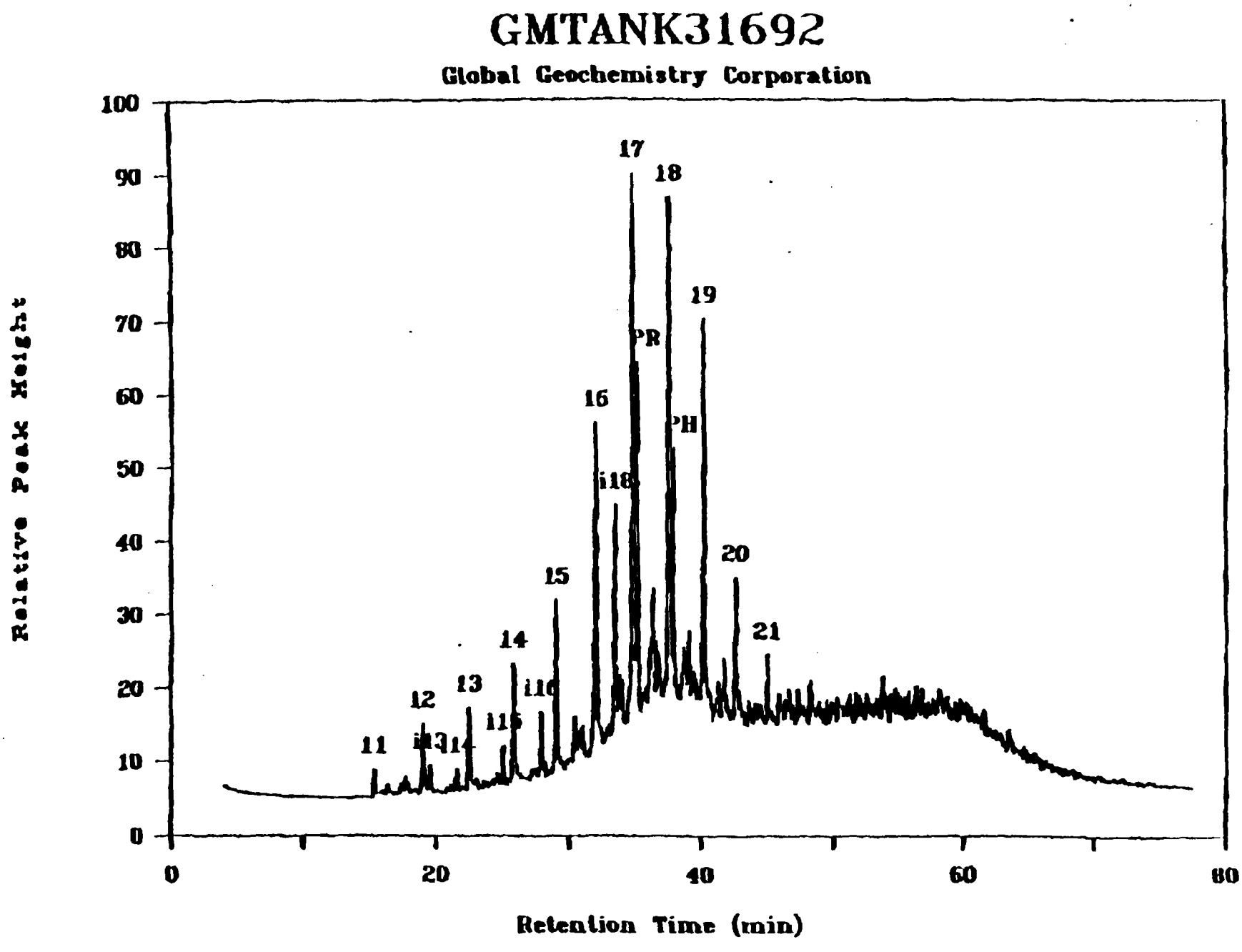
GMTANK31692
Global Geochemistry Corporation
Relative Peak Height
Retention Time (min)
0
10
20
30
40
50
60
70
80
90
100
0
20
40
60
80
11
12
13
14
15
16
17
18
19
20
21
PR
PH

EXHIBIT B

Table 2. Summary of Surface Water Analytical Data

Compound	Samples from Creek Area				Samples from Imhoff Tank	
	GMSW-01 C136137	GMSW-02 C136138	GMSW-03 C136139	GMSW-04 C136140	GMWW-01 C136072	Unmarked Oil C136077
Volatile Organics (ug/l)						
Acetone						830
Chloromethane						160
1,1-Dichloroethane					6	
1,2-Dichloroethene				3J	89	
Ethylbenzene					3J	
Methylene chloride						2,500
1,1,1-Trichloroethane					11	
Trichloroethene					27	
Vinyl chloride					13	
Xylenes, total					4J	
Semivolatile Organics (ug/l)						
Bis(2-ethylhexyl)phthalate	30J				11	
Di-n-butylphthalate						36,000J
4-Methylphenol					10J	
PCBs (mg/l)						
Arochlor 1016	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1221	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1232	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1242	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1248	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1254	BDL	BDL	BDL	BDL	BDL	3.1
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1262	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. All data that is shown in this summary table is preliminary.
2. The units for the unmarked oil sample from the Imhoff tank are ug/kg for volatiles and semivolatiles organics and mg/kg for PCBs.
3. A "J" qualifier indicates that the concentration is an estimated quantity.
4. "BDL" indicates that the constituent is below the laboratory detection limit.

Summary of Floor Wipe Samples

Sample ID#	*Arochlor-1254*	*Arochlor-1260*
ExpJnt Compound #1	54	9.5
ExpJnt Compound #2	43	6.0
Floor-01	17	2.0
Floor-02	19	4.3
Floor-03	15	3.2
Floor-04	7.0	BDL
Floor-05	53	8.2
Floor-06	17	4.4
Floor-07	BDL	BDL
Floor-08	BDL	BDL
Floor-09	BDL	BDL
Floor-10	BDL	BDL
Floor-11	BDL	BDL
Floor-12	BDL	BDL
Floor-13	BDL	BDL
Floor-14	9.6	BDL
Floor-15	BDL	BDL
Floor-16	BDL	BDL
Floor-17	BDL	BDL
Floor-18	BDL	BDL
Floor-19	BDL	BDL
Floor-20	4.5	BDL
Floor-21	BDL	BDL

Sample ID#	*Arochlor-1254*	*Arochlor-1260*
Floor-22	BDL	BDL
Floor-23	2.7	BDL
Floor-24	BDL	BDL
Floor-25	28	5.9
Floor-26	11	3.0
Floor-27	8.8	BDL
Floor-28	BDL	8.4
Floor-29	10.3	2.7
Floor-30	5.4	BDL
Floor-31	11	2.8
Floor-32	16	3.3
Floor-33	28	BDL
Floor-34	9.5	BDL
Floor-35	4.9	BDL
Floor-36	BDL	BDL
Floor-37	BDL	BDL
Floor-38	BDL	BDL
Floor-39	BDL	BDL
Floor-40	BDL	BDL
Floor-42	BDL	BDL
Floor-43	BDL	BDL
Floor-44	BDL	BDL
Floor-45	BDL	BDL

Notes:

1. All concentrations are reported in micrograms (ug) with a detection limit of 2.5 ug.
2. "BDL" indicates that the concentration was below the laboratory detection limit. All other Arochlors were BDL.
3. Samples Floor-01 through Floor-06 were scrape samples while Samples Floor-07 through Floor-45 were wipe samples.
4. There is no sample Floor-41.

EXHIBIT D

Summary of Subsurface Soil Analytical Data

Compound	*GMSB13-0002 C136494*	*GMSB13-0810 C136495*	*GMSB13-1012 C136496*	*GMSB14-0002 C136337*	*GMSB14-0608 C136338*	*GMSB15-0002 C136332*	*GMSB15-1012 C136333*
Volatile Organics (ug/kg)							
Acetone	2,300		480				130
Chloromethane		45J					
1,2-Dichloroethene, total							
Ethylbenzene		250					7
2-Hexanone							62
Methyl ethyl ketone		380					
4-Methyl-2-Pentanone							28
Styrene							8
Tetrachloroethene		360					
Trichloroethene							
Xylene, total		680					4J
Semivolatile Organics (ug/kg)							
Bis(2-ethylhexyl)phthalate				380		250J	370
PCBs (mg/kg)							
Arochlor 1254	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. A "J" qualifier indicates that the concentration is an estimated quantity.
2. "BDL" indicates that the constituent is below the laboratory detection limit.

Summary of Subsurface Soil Analytical Data

Compound	*GMSB15-1214 C136334*	*GMSB16-0002 C136335*	*GMSB16-0406 C136336*	*GMSB16-0810 C136412*	*GMSB16-120135 C136413*	*GMSB17-0103 C137255*	*GMSB17-0709 C137252*
Volatile Organics (ug/kg)							
Acetone	160			1,000	83	96	35
Chloromethane							
1,2-Dichloroethene, total					5		
Ethylbenzene							
2-Hexanone							
Methyl ethyl ketone							
4-Methyl-2-Pentanone							
Styrene							
Tetrachloroethene							
Trichloroethene					7		
Xylene, total							
Semivolatile Organics (ug/kg)							
Bis(2-ethylhexyl)phthalate		2,300	270J	290J	920	350B	220J
PCBs (mg/kg)							
Arochlor 1254	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. A "J" qualifier indicates that the concentration is an estimated quantity.
2. "BDL" indicates that the constituent is below the laboratory detection limit.

Summary of Monitoring Well Soil Analytical Data

Compound	*GMMW1B-0406 C137214*	*GMMW1B-1314 C137217*	*GMMW1B-1618 C137216*	*GMMW1B-2628 C137253*	*GMMW2A-1618 C137218*	*GMMW2B-8085 C137008*	*GMMW2B-1416 C137009*
Volatile Organics (ug/kg)							
Acetone	790	110	51	•	190		230
Carbon Disulfide	20J						
Chloroethane							
1,2-Dichloroethene, total	53						
Ethylbenzene	6,900						
Fluorotrichloromethane							
Methylene chloride	39	7	15		9		
Tetrachloroethene	32						
Tetrahydrofuran				38			
Toluene	130	7	10				
1,1,1-Trichloroethane							
Trichloroethene	22J		7				
Xylene, total	33,000						
Semivolatile Organics (ug/kg)							
Anthracene	6,200						
Bis(2-ethylhexyl)phthalate		700	2,100	560B	510	4,200B	920
2-Methylnaphthalene	5,400					440	
Naphthalene	9,500						
Phenanthrene	6,200						
4-Chloro-3-Methylphenol	3,300						
PCBs (mg/kg)							
Arochlor 1254	20	BDL	BDL	BDL	BDL	8.5	BDL
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. A "J" qualifier indicates that the concentration is an estimated quantity.
2. "BDL" indicates that the constituent is below the laboratory detection limit.

Summary of Subsurface Soil Analytical Data

Compound	*GMSB18-0002 C136497*	*GMSB18-0204 C136498*	*GMSB18-1415 C136499*	*GMSB18-1516 C136500*
Volatile Organics (ug/kg)				
Acetone	9J	930	52	38
Chloromethane				
1,2-Dichloroethene, total				
Ethylbenzene				
2-Hexanone				
Methyl ethyl ketone				
4-Methyl-2-Pentanone				
Styrene				
Tetrachloroethene				
Trichloroethene				
Xylene, total				
Semivolatile Organics (ug/kg)				
Bis(2-ethylhexyl)phthalate	670	450	270J	
PCBs (mg/kg)				
Arochlor 1254	BDL	22	BDL	BDL
Arochlor 1260	BDL	2.8	BDL	BDL

Notes:

1. A "J" qualifier indicates that the concentration is an estimated quantity.
2. "BDL" indicates that the constituent is below the laboratory detection limit.

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Summary of Monitoring Well Soil Analytical Data

Compound	*GMMW2B-200215 C137010*	*GMMW2B-275295 C137215*	*GMMW3-0607 C137445*	*GMMW3-163180 C137446*	*GMMW4-0002 C136809*	*GMMW4-275278 C136932*	*GMMW4-320338 C136933*
Volatile Organics (ug/kg)							
Acetone	180	200	340	1,000			
Carbon Disulfide							
Chloroethane							
1,2-Dichloroethene, total							
Ethylbenzene			130				
Fluorotrichloromethane							
Methylene chloride		6			8		
Tetrachloroethene							
Tetrahydrofuran							
Toluene		7					
1,1,1-Trichloroethane							
Trichloroethene		6					
Xylene, total			310				
Semivolatile Organics (ug/kg)							
Anthracene							
Bis(2-ethylhexyl)phthalate	1,100	240J	5,400	960	220J	560B	970B
2-Methylnaphthalene							
Naphthalene							
Phenanthrene							
4-Chloro-3-Methylphenol							
PCBs (mg/kg)							
Arochlor 1254	BDL	BDL	130	BDL	BDL	BDL	BDL
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. A "J" qualifier indicates that the concentration is an estimated quantity.
2. "BDL" indicates that the constituent is below the laboratory detection limit.

Summary of Monitoring Well Soil Analytical Data

Compound	*GMMW5-9510 C136722*	*GMMW5-417427 C136723*	*GMMW6B-2729 C136940*	*GMMW7-0406 C137254*	*GMMW7-115120 C137249*	*GMMW7B-1113 C137293*	*GMMW7B-1719 C137435*
Volatile Organics (ug/kg)							
Acetone	150		490		43	81	83
Carbon Disulfide							
Chloroethane					3J		
1,2-Dichloroethene, total				1,800	19		
Ethylbenzene				760			
Fluorotrichloromethane						4J	
Methylene chloride					140		
Tetrachloroethene							
Tetrahydrofuran							
Toluene							
1,1,1-Trichloroethane					3J		
Trichloroethene				120J	•	7	
Xylene, total				890			
Semivolatile Organics (ug/kg)							
Anthracene							
Bis(2-ethylhexyl)phthalate		330	570B	820B	300J	760B	780
2-Methylnaphthalene							
Naphthalene							
Phenanthrene							
4-Chloro-3-Methylphenol							
PCBs (mg/kg)							
Arochlor 1254	BDL	BDL	BDL	3.8	BDL	BDL	BDL
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. A "J" qualifier indicates that the concentration is an estimated quantity.
2. "BDL" indicates that the constituent is below the laboratory detection limit.

Summary of Monitoring Well Soil Analytical Data

Compound	*GMMW7B-4951 C137436*	*GMMW8-0507 C137291*	*GMMW8-1517 C137292*	*GMMW8-2123 C137431*	*GMMW8-2527 C137430*	*GMMW9-0002 C137450*	*GMMW9-2022 C137449*
Volatile Organics (ug/kg)							
Acetone	90	1,100	35	150	200		120
Carbon Disulfide							
Chloroethane							
1,2-Dichloroethene, total							
Ethylbenzene							
Fluorotrichloromethane							
Methylene chloride							
Tetrachloroethene							
Tetrahydrofuran							
Toluene							
1,1,1-Trichloroethane							
Trichloroethene							
Xylene, total							
Semivolatile Organics (ug/kg)							
Anthracene							
Bis(2-ethylhexyl)phthalate	220J	170J	2,200B				
2-Methylnaphthalene							
Naphthalene							
Phenanthrene							
4-Chloro-3-Methylphenol							
PCBs (mg/kg)							
Arochlor 1254	BDL	4.1	BDL	BDL	BDL	BDL	BDL
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. A "J" qualifier indicates that the concentration is an estimated quantity.
2. "BDL" indicates that the constituent is below the laboratory detection limit.

Table 1. Summary of Additional Surface Soil Analytical Data

Compound	*GMSS-13 A246182*	*GMSS-14 A246183*	*GMSS-15 A246184*	*GMSS-16 C136073*	*GMSS-17 C136074*	*GMSS-18 C136075*	*GMSS-19 C136076*	*GMSS-20 C136129*
Volatile Organics (mg/kg)								
Acetone				0.027	0.051	0.029		
1,2-Dichloroethene								
Trichloroethene								
Semivolatile Organics (ug/kg)								
Benzylbutylphthalate					210J	260J	300J	360
Bis(2-ethylhexyl)phthalate						220J	310J	530
Di-n-butylphthalate					990	760	670	430
Fluoranthene		440		210J				
Pyrene		350J		210J				
PCBs (mg/kg)								
Arochlor 1016	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1221	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1232	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1242	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1248	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1254	BDL	0.32	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1262	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. A "J" qualifier indicates that the concentration is an estimated quantity.
2. "BDL" indicates that the constituent is below the laboratory detection limit.

Table 1. Summary of Additional Surface Soil Analytical Data

Compound	*GMSS-21 C136130*	*GMSS-22 C136131*	*GMSS-23 C136132*	*GMSS-24 C136133*	*GMSS-25 C136134*	*GMSS-26 C136136*	*GMSS-27 C136797*	*GMSS-28 C136798*
Volatile Organics (mg/kg)								
Acetone				0.035		0.055		0.043
1,2-Dichloroethene		0.570						
Trichloroethene		0.018						
Semivolatile Organics (ug/kg)								
Benzylbutylphthalate								
Bis(2-ethylhexyl)phthalate		200J						180J
Di-n-butylphthalate	230J	550	340	360	180J	220J		
Flouranthene								
Pyrene								
PCBs (mg/kg)								
Arochlor 1016	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1221	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1232	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1242	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1248	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1254	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1262	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. A "J" qualifier indicates that the concentration is an estimated quantity.
2. "BDL" indicates that the constituent is below the laboratory detection limit.

Table 1. Summary of Additional Surface Soil Analytical Data

Compound	*GMSS-29 C136799*	*GMSS-30 C136800*	*GMSS-31 C136801*	*GMSS-32 C136802*	*GMSS-33A C136803*	*GMSS-33B C136804*	*GMSS-34A C136805*	*GMSS-34B C136806*
Volatile Organics (mg/kg)								
Acetone								
1,2-Dichloroethene								
Trichloroethene								
Semivolatile Organics (ug/kg)								
Benzylbutylphthalate								
Bis(2-ethylhexyl)phthalate	1,300	650	1,000			330	390	180J
Di-n-butylphthalate								
Flouranthene								
Pyrene								
PCBs (mg/kg)								
Arochlor 1016	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1221	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1232	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1242	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1248	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1254	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1262	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. A "J" qualifier indicates that the concentration is an estimated quantity.
2. "BDL" indicates that the constituent is below the laboratory detection limit.

Table 2. Summary of Surface Water Analytical Data

Compound	Samples from Creek Area				Samples from Imhoff Tank	
	GMSW-01 C136137	GMSW-02 C136138	GMSW-03 C136139	GMSW-04 C136140	GMWW-01 C136072	Unmarked Oil C136077
Volatile Organics (ug/l)						
Acetone						330
Chloromethane						160
1,1-Dichloroethane					6	
1,2-Dichloroethene				3J	39	
Ethylbenzene					3J	
Methylene chloride						2,500
1,1,1-Trichloroethane					11	
Trichloroethene					27	
Vinyl chloride					13	
Xylenes, total					4J	
Semivolatile Organics (ug/l)						
Bis(2-ethylhexyl)phthalate	30J				11	
Di-n-butylphthalate						36,000J
4-Methylphenol					10J	
PCBs (mg/l)						
Arochlor 1016	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1221	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1232	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1242	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1248	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1254	BDL	BDL	BDL	BDL	BDL	3.1
Arochlor 1260	BDL	BDL	BDL	BDL	BDL	BDL
Arochlor 1262	BDL	BDL	BDL	BDL	BDL	BDL

Notes:

1. All data that is shown in this summary table is preliminary.
2. The units for the unmarked oil sample from the Imhoff tank are ug/kg for volatiles and semivolatiles organics and mg/kg for PCBs.
3. A "J" qualifier indicates that the concentration is an estimated quantity.
4. "BDL" indicates that the constituent is below the laboratory detection limit.

Table 1. Summary of Additional Surface Soil Analytical Data

Compound	*GMSS-35 C136807*	*GMSS-36 C136808*	*GMSS-40 C136801*	*GMSS-41 C136802*
Volatile Organics (mg/kg)				
Acetone				510
1,2-Dichloroethene				
Tetrachloroethene	900	1,200		
Trichloroethene				
Semivolatile Organics (ug/kg)				
Benzylbutylphthalate				
Bis(2-ethylhexyl)phthalate	16,000B	2,600J	210J	4,600
4-Chloro-3-Methylphenol			760	
Flouranthene				
Hexachlorobenzene	1,000J	2,500J		
PCBs (mg/kg)				
Arochlor 1016	BDL	BDL	BDL	BDL
Arochlor 1221	BDL	BDL	BDL	BDL
Arochlor 1232	BDL	BDL	BDL	BDL
Arochlor 1242	BDL	BDL	BDL	BDL
Arochlor 1248	BDL	BDL	BDL	BDL
Arochlor 1254	3.1	12	BDL	BDL
Arochlor 1260	BDL	BDL	BDL	3.5
Arochlor 1262	BDL	BDL	BDL	BDL

Notes:

1. A "J" qualifier indicates that the concentration is an estimated quantity.
2. "BDL" indicates that the constituent is below the laboratory detection limit.

Table 1. Summary of Additional Surface Soil Analytical Data (Metals Only)

Compound	*GMSS-33A C136803*	*GMSS-33B C136804*	*GMSS-34A C136805*	*GMSS-34B C136806*	*GMSS-35 C136807*	*GMSS-36 C136808*
Metals (mg/kg)						
Antimony	BDL	BDL	BDL	BDL	30	24
Aluminum	1,100	1,400	1,500	1,200	9,800	9,000
Arsenic	BDL	BDL	2.1	BDL	BDL	5.7
Barium	8.4	10	BDL	7.9	690	540
Beryllium	0.22	0.22	0.21	BDL	0.22	0.22
Cadmium	150	139	280	120	1,300	1,600
Calcium	44,000	63,000	68,000	37,000	4,100	5,700
Chromium	240	190	720	41	14,000	12,000
Cobalt	3.2	3.1	3.7	3.5	25	17
Copper	28	27	39	32	1,700	650
Iron	5,600	8,000	6,700	6,600	26,000	30,000
Lead	28	18	75	10	3,600	3,400
Manganese	140	220	210	220	110	150
Mercury	BDL	BDL	BDL	BDL	7.4	6.5
Nickel	47	47	63	45	1,400	510
Potassium	220	220	180	120	270	430
Selenium	BDL	BDL	BDL	BDL	BDL	BDL
Silver	BDL	BDL	BDL	BDL	4.3	3.4
Thallium	BDL	BDL	BDL	BDL	BDL	BDL
Vanadium	BDL	BDL	BDL	BDL	BDL	BDL
Zinc	600	270	980	120	8,100	8,900

Notes:

1. A "J" qualifier indicates that the concentration is an estimated quantity.
2. "BDL" indicates that the constituent is below the laboratory detection limit.

EXHIBIT E

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
EMS HERITAGE LABORATORIES, INC. 1319 MARQUETTE DRIVE ROMEOVILLE, IL 60441 (708)378-1600	26-FEB-92	C136492
	Complete 05-MAR-92	PO Number CI 138.02
	Printed 06-MAR-92	Sampled 25-FEB-92 16:01

Report To	Bill To
GERAGHTY & MILLER, INC. JAMES AUER 75 EAST WACKER, SUITE 1100 CHICAGO, IL 60601	GERAGHTY & MILLER, INC. ACCOUNTS PAYABLE 75 EAST WACKER, SUITE 1100 CHICAGO, IL 60601

Sample Description

DESCRIPTION: ZEXEL ILLINOIS INC.
SAMPLE I.D.: GMSW-0F2

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510

Analyst: P. WINTERS Analysis Date: 27-FEB-92 Test: P233.1. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	920		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8080

Analyst: M. KATTNER Analysis Date: 04-MAR-92 Instrument: GC/ECD Test: 0305.1. 0

Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.05	ug/L
BETA-BHC	BDL	0.05	ug/L
DELTA-BHC	BDL	0.05	ug/L
GAMMA-BHC (LINDANE)	BDL	0.05	ug/L
HEPTACHLOR	BDL	0.05	ug/L
ALDRIN	BDL	0.05	ug/L
HEPTACHLOR EPOXIDE	BDL	0.05	ug/L
ENDOSULFAN I	BDL	0.05	ug/L
DIELDRIN	BDL	0.10	ug/L
4,4'-DDE	BDL	0.10	ug/L
ENDRIN	BDL	0.10	ug/L
ENDOSULFAN II	BDL	0.10	ug/L
4,4'-DDD	BDL	0.10	ug/L
ENDOSULFAN SULFATE	BDL	0.10	ug/L
4,4'-DDT	BDL	0.10	ug/L
METHOXYCHLOR	BDL	0.5	ug/L
ENDRIN ALDEHYDE	BDL	0.10	ug/L
ENDRIN KETONE	BDL	0.10	ug/L
ALPHA-CHLORDANE	BDL	0.5	ug/L
GAMMA-CHLORDANE	BDL	0.5	ug/L
TOXAPHENE	BDL	1.0	ug/L
PCB AROCHLOR 1016	BDL	0.5	ug/L
PCB AROCHLOR 1221	BDL	0.5	ug/L
PCB AROCHLOR 1232	BDL	0.5	ug/L
PCB AROCHLOR 1242	BDL	0.5	ug/L
PCB AROCHLOR 1248	BDL	0.5	ug/L
PCB AROCHLOR 1254	BDL	1.0	ug/L

EMS HERITAGE LABORATORIES, INC.

Lab Sample ID: C136492

Parameter	Result	Det. Limit	Units
PCB AROCLOR 1260	BDL	1.0	ug/L

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510

Analyst: S. BUSSEY Analysis Date: 28-FEB-92 Test: P233.4. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270

Analyst: H. QIAN Analysis Date: 02-MAR-92 Instrument: GC/MS SVOA Test: 0505.3. 0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
BENZYL ALCOHOL	BDL	10	ug/L
BENZYLBUTYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMOPHENYLPHENYLETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYLPHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE	BDL	10	ug/L
1,3-DICHLOROBENZENE	BDL	10	ug/L
1,4-DICHLOROBENZENE	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	20	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
DINITROBENZENES	BDL	50	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE	BDL	50	ug/L
3-NITROANILINE	BDL	50	ug/L

Parameter	Result	Det. Limit	Units
4-NITROANILINE	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSO-DIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
2-PICOLINE	BDL	50	ug/L
PYRENE	BDL	10	ug/L
PYRIDINE	BDL	50	ug/L
TETRACHLOROBENZENES	BDL	10	ug/L
TOLUENEDIAMINE	BDL	50	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
BENZOIC ACID	BDL	50	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-2-METHYLPHENOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL	BDL	10	ug/L
4-METHYLPHENOL	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
TETRACHLOROPHENOL	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	10	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
SURROGATE RECOVERY			
2-FLUOROPHENOL	39		% Rec
PHENOL-D5	29		% Rec
NITROBENZENE-D5	78		% Rec
2-FLUOROBIPHENYL	74		% Rec
2,4,6-TRIBROMOPHENOL	56		% Rec
TERPHENYL-D14	60		% Rec

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Analyst: J. VANSKYOCK Analysis Date: 27-FEB-92 Test: P130.4. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL WEIGHT OR VOLUME	50		mL

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Analyst: J. VANSKYOCK Analysis Date: 02-MAR-92 Test: P130.4. 1

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL WEIGHT OR VOLUME	50		mL

GFAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-3020

Analyst: E. MERRILL Analysis Date: 27-FEB-92 Test: P130.6. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL WEIGHT OR VOLUME	50		mL

EMS HERITAGE LABORATORIES, INC. Lab Sample ID: C136492

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Analyst: K. HACK Analysis Date: 28-FEB-92 Test: P131.6. 0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	100		mL
FINAL VOLUME	100		mL

ALUMINUM ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M101.3. 0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
ALUMINUM	0.95	0.050	mg/L

ANTIMONY ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M102.3. 0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.12	mg/L

1:4 dilution

ARSENIC GFAA SW846-7060

Analyst: M. BAUER Analysis Date: 27-FEB-92 Instrument: GFAA Test: M103.2. 0

Prep: GFAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-3020

Parameter	Result	Det. Limit	Units
ARSENIC	0.038	0.0050	mg/L

BARIUM ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M104.3. 0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
BARIUM	0.30	0.010	mg/L

BERYLLIUM ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M105.3. 0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0050	mg/L

CADMIUM ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M108.3. 0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M109.3. 0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
CALCIUM	310	0.20	mg/L

CHROMIUM ICP SW846-6010

Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M110.3. 0

Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
CHROMIUM	0.018	0.010	mg/L

COBALT ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M111.3. 0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
COBALT	0.023	0.010	mg/L

COPPER ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M112.3. 0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M115.3. 0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
IRON	66.	0.025	mg/L

LEAD ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M116.3. 0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.050	mg/L

MANGANESE ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 02-MAR-92 Instrument: ICP Test: M119.3. 0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
MANGANESE	17	0.010	mg/L

MERCURY CVAA SW846-7470
Analyst: K. HACK Analysis Date: 02-MAR-92 Instrument: CVAA Test: M120.1. 0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470

Parameter	Result	Det. Limit	Units
MERCURY	0.0017	0.00020	mg/L

NICKEL ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M122.3. 0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
NICKEL	0.032	0.010	mg/L

prep blank was 0.013 mg/l

POTASSIUM ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M126.3. 0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
POTASSIUM	1.9	0.20	mg/L

SELENIUM GFAA SW846-7740
Analyst: M. BAUER Analysis Date: 28-FEB-92 Instrument: GFAA Test: M128.2. 0
Prep: GFAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-3020

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.020	mg/L

1:4 DILUTION

SILVER ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M130.3. 0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M131.3. 0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
SODIUM	21.	0.20	mg/L

THALLIUM ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M134.3. 0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.30	mg/L

VANADIUM ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M138.3. 0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010
Analyst: A. HILSCHER Analysis Date: 27-FEB-92 Instrument: ICP Test: M139.3. 0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005

Parameter	Result	Det. Limit	Units
ZINC	0.35	0.020	mg/L

VOLATILE ORGANICS SW846-8240
Analyst: L. DIAZ Analysis Date: 27-FEB-92 Instrument: GC/MS VOA Test: O510.3. 0

Parameter	Result	Det. Limit	Units
ACETONE	36	20	ug/L
ACROLEIN	BDL	50	ug/L
ACRYLONITRILE	BDL	70	ug/L
BENZENE	BDL	5	ug/L
BROMODICHLOROMETHANE	BDL	5	ug/L
BROMOFORM	BDL	5	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	5	ug/L
CARBON TETRACHLORIDE	BDL	5	ug/L
CHLOROBENZENE	BDL	5	ug/L
CHLOROETHANE	BDL	10	ug/L
CHLOROFORM	BDL	5	ug/L
CHLOROMETHANE	BDL	10	ug/L
DIBROMOCHLOROMETHANE	BDL	5	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/L
DICHLORODIFLUOROMETHANE	BDL	5	ug/L
1,1-DICHLOROETHANE	EST 4	5	ug/L
1,2-DICHLOROETHANE	BDL	5	ug/L
1,1-DICHLOROETHENE	24	5	ug/L
1,2-DICHLOROPROPANE	BDL	5	ug/L
ETHYLBENZENE	BDL	5	ug/L
FLUOROTRICHLOROMETHANE	BDL	5	ug/L
2-HEXANONE	BDL	10	ug/L
METHYLENE CHLORIDE	BDL	5	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L

Parameter	Result	Det. Limit	Units
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	5	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/L
TETRACHLOROETHENE	7	5	ug/L
TETRAHYDROFURAN	BDL	25	ug/L
TOLUENE	BDL	5	ug/L
1,2-DICHLOROETHENE (TOTAL)	*	5	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/L
1,1,1-TRICHLOROETHANE	BDL	5	ug/L
1,1,2-TRICHLOROETHANE	BDL	5	ug/L
TRICHLOROETHENE	*	5	ug/L
VINYL ACETATE	BDL	10	ug/L
VINYL CHLORIDE	*	10	ug/L
XYLENE (TOTAL)	BDL	5	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	93		% Rec
TOLUENE-D8	102		% Rec
BROMOFLUOROBENZENE	110		% Rec

Values are outside the linear calibration curve. Sample will be re-analyzed at a dilution of 1:20.

VOLATILE ORGANICS SW846-8240

Analyst: L. DIAZ Analysis Date: 27-FEB-92 Instrument: GC/MS VOA Test: 0510.3. 1

Parameter	Result	Det. Limit	Units
ACETONE	BDL	400	ug/L
ACROLEIN	BDL	1000	ug/L
ACRYLONITRILE	BDL	1400	ug/L
BENZENE	BDL	100	ug/L
BROMODICHLOROMETHANE	BDL	100	ug/L
BROMOFORM	BDL	100	ug/L
BROMOMETHANE	BDL	200	ug/L
CARBON DISULFIDE	BDL	100	ug/L
CARBON TETRACHLORIDE	BDL	100	ug/L
CHLOROBENZENE	BDL	100	ug/L
CHLOROETHANE	BDL	200	ug/L
CHLOROFORM	BDL	100	ug/L
CHLOROMETHANE	BDL	200	ug/L
DIBROMOCHLOROMETHANE	BDL	100	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	100	ug/L
DICHLORODIFLUOROMETHANE	BDL	100	ug/L
1,1-DICHLOROETHANE	BDL	100	ug/L
1,2-DICHLOROETHANE	BDL	100	ug/L
1,1-DICHLOROETHENE	BDL	100	ug/L
1,2-DICHLOROPROPANE	BDL	100	ug/L
ETHYLBENZENE	BDL	100	ug/L
FLUOROTRICHLOROMETHANE	BDL	100	ug/L
2-HEXANONE	BDL	200	ug/L
METHYLENE CHLORIDE	BDL	100	ug/L
METHYL ETHYL KETONE	BDL	200	ug/L
4-METHYL-2-PENTANONE	BDL	200	ug/L
STYRENE	BDL	100	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	100	ug/L
TETRACHLOROETHENE	BDL	100	ug/L
TETRAHYDROFURAN	BDL	500	ug/L

EMS HERITAGE LABORATORIES, INC.

Lab Sample ID: C136492

Parameter	Result	Det. Limit	Units
TOLUENE	BDL	100	ug/L
1,2-DICHLOROETHENE (TOTAL)	*	100	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	100	ug/L
1,1,1-TRICHLOROETHANE	BDL	100	ug/L
1,1,2-TRICHLOROETHANE	BDL	100	ug/L
TRICHLOROETHENE	2400	100	ug/L
VINYL ACETATE	BDL	200	ug/L
VINYL CHLORIDE	280	200	ug/L
XYLENE (TOTAL)	BDL	100	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	93		% Rec
TOLUENE-D8	98		% Rec
BROMOFLUOROBENZENE	98		% Rec

** Compound is outside the normal calibration range. Further dilution was necessary.*

VOLATILE ORGANICS SW846-8240

Analyst: L. DIAZ Analysis Date: 27-FEB-92 Instrument: GC/MS VOA Test: 0510.3. 2

Parameter	Result	Det. Limit	Units
ACETONE	BDL	1000	ug/L
ACROLEIN	BDL	2500	ug/L
ACRYLONITRILE	BDL	3500	ug/L
BENZENE	BDL	250	ug/L
BROMODICHLOROMETHANE	BDL	250	ug/L
BROMOFORM	BDL	250	ug/L
BROMOMETHANE	BDL	500	ug/L
CARBON DISULFIDE	BDL	250	ug/L
CARBON TETRACHLORIDE	BDL	250	ug/L
CHLOROBENZENE	BDL	250	ug/L
CHLOROETHANE	BDL	500	ug/L
CHLOROFORM	BDL	250	ug/L
CHLOROMETHANE	BDL	500	ug/L
DIBROMOCHLOROMETHANE	BDL	250	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	250	ug/L
DICHLORODIFLUOROMETHANE	BDL	250	ug/L
1,1-DICHLOROETHANE	BDL	250	ug/L
1,2-DICHLOROETHANE	BDL	250	ug/L
1,1-DICHLOROETHENE	BDL	250	ug/L
1,2-DICHLOROPROPANE	BDL	250	ug/L
ETHYLBENZENE	BDL	250	ug/L
FLUOROTRICHLOROMETHANE	BDL	250	ug/L
2-HEXANONE	BDL	500	ug/L
METHYLENE CHLORIDE	BDL	250	ug/L
METHYL ETHYL KETONE	BDL	500	ug/L
4-METHYL-2-PENTANONE	BDL	500	ug/L
STYRENE	BDL	250	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	250	ug/L
TETRACHLOROETHENE	BDL	250	ug/L
TETRAHYDROFURAN	BDL	1200	ug/L
TOLUENE	BDL	250	ug/L
1,2-DICHLOROETHENE (TOTAL)	6000	250	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	250	ug/L
1,1,1-TRICHLOROETHANE	BDL	250	ug/L
1,1,2-TRICHLOROETHANE	BDL	250	ug/L

EMS HERITAGE LABORATORIES, INC. Lab Sample ID: C136492

Parameter	Result	Det. Limit	Units
TRICHLOROETHENE	BDL	250	ug/L
VINYL ACETATE	BDL	500	ug/L
VINYL CHLORIDE	BDL	500	ug/L
XYLENE (TOTAL)	BDL	250	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	98		% Rec
TOLUENE-D8	97		% Rec
BROMOFLUOROBENZENE	112		% Rec

Sample Comments

* *See Note for Parameter*
BDL Below Detection Limit
EST Estimated Value

Quality Assurance Officer: _____

EXHIBIT F

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
EMS HERITAGE LABORATORIES, INC. 1319 MARQUETTE DRIVE ROMEOVILLE, IL 60441 (708)378-1600	10-APR-92	C137452
	Complete 14-APR-92	PO Number .....
	Printed 15-APR-92	Sampled 09-APR-92 15:00

Report To	Bill To
JAMES AUER GERAGHTY & MILLER, INC. 75 EAST WACKER, SUITE 1100 CHICAGO, IL 60601	ACCOUNTS PAYABLE GERAGHTY & MILLER, INC. 75 EAST WACKER, SUITE 1100 CHICAGO, IL 60601

Sample Description

DESCRIPTION: ZEXEL
SAMPLE I.D.: GMSW-0F2B

VOLATILE ORGANICS SW846-8240

Analyst: S. SHARP Analysis Date: 13-APR-92 Instrument: GC/MS VOA Test: 05t0.3.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/L
ACROLEIN	BDL	50	ug/L
ACRYLONITRILE	BDL	70	ug/L
BENZENE	BDL	5	ug/L
BROMODICHLOROMETHANE	BDL	5	ug/L
BROMOFORM	BDL	5	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	5	ug/L
CARBON TETRACHLORIDE	BDL	5	ug/L
CHLOROBENZENE	BDL	5	ug/L
CHLOROETHANE	BDL	10	ug/L
CHLOROFORM	BDL	5	ug/L
CHLOROMETHANE	BDL	10	ug/L
DIBROMOCHLOROMETHANE	BDL	5	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	5	ug/L
DICHLORODIFLUOROMETHANE	BDL	5	ug/L
1,1-DICHLOROETHANE	5	5	ug/L
1,2-DICHLOROETHANE	BDL	5	ug/L
1,1-DICHLOROETHENE	28	5	ug/L
1,2-DICHLOROPROPANE	BDL	5	ug/L
ETHYLBENZENE	BDL	5	ug/L
FLUOROTRICHLOROMETHANE	BDL	5	ug/L
2-HEXANONE	BDL	10	ug/L
METHYLENE CHLORIDE	BDL	5	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	5	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	5	ug/L
TETRACHLOROETHENE	EST 4	5	ug/L
TETRAHYDROFURAN	BDL	25	ug/L
TOLUENE	BDL	5	ug/L
1,2-DICHLOROETHENE (TOTAL)	*	5	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	5	ug/L
1,1,1-TRICHLOROETHANE	BDL	5	ug/L

EMS HERITAGE LABORATORIES, INC. Lab Sample ID: C137452

Parameter	Result	Det. Limit	Units
1,1,2-TRICHLOROETHANE	BDL	5	ug/L
TRICHLOROETHENE	*	5	ug/L
VINYL ACETATE	BDL	10	ug/L
VINYL CHLORIDE	*	10	ug/L
XYLENE (TOTAL)	BDL	5	ug/L
...			
SURROGATE RECOVERY			
DICHLOROETHANE-D4	86		% Rec
TOLUENE-D8	97		% Rec
BROMOFLUOROBENZENE	103		% Rec

This value is outside of he linear calibration range. The sample will be reanalyzed at a 1:25 dilution.

VOLATILE ORGANICS SW846-8240

Analyst: S. SHARP Analysis Date: 15-APR-92 Instrument: GC/MS VOA Test: 0510.3.1

Parameter	Result	Det. Limit	Units
1,2-DICHLOROETHENE (TOTAL)	6700	120	ug/L
TRICHLOROETHENE	1900	120	ug/L
VINYL CHLORIDE	360	250	ug/L
...			
SURROGATE RECOVERY			
DICHLOROETHANE-D4	95		% Rec
TOLUENE-D8	90		% Rec
BROMOFLUOROBENZENE	111		% Rec

Sample Comments

* *See Note for Parameter*
BDL Below Detection Limit
EST Estimated Value

Sample chain of custody number 1061.

Quality Assurance Officer: _____

ATTACHMENT D

ZEXEL SAMPLING RESULTS